The Journal of the American Medical Association

Published under the Auspices of the Board of Trustees

VOL. LVIII, No. 17 CHICAGO, ILLINOIS APRIL 27, 1912

THANATOLOGY

A QUESTIONNAIRE AND A PLEA FOR A NEGLECTED STUDY

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Is it possible to watch the "vital spark of heavenly flame," as it quits "this mortal frame" and not be overcome by the mystery of death as the termination of that even greater mystery, life? Is there inspiration in the pagan emperor's address to his soul—those Latin verses which Pope has so beautifully translated?

To the speculative philosopher death may have a different significance, and one not altogether included in that given to it by the physiologist. To the former it is a subject for transcendental speculation; to the latter it is the terminal stage of that adjustment of internal and external relations which, for Spencer, constitutes life. For us its primary and immediate significance is purely mundane, yet it deserves such serious study from a practical viewpoint as it seldom receives.

What is death? When does it actually occur? How can it occur when the majority of cells in the previously living organism live on for hours or for days or, under certain favoring circumstances, retain potentialities of life for indefinite periods? These and numberless related questions constitute a line of inquiry that may well call for a separate department of science. Pondering in this wise, I long ago coined an expression which years later I found had been incorporated in the scientific dictionaries, though never before heard by me or encountered in my reading. "Thanatology" is this word, and it may be defined as the study of the nature and causes of death. Inseparable from it, however, are certain considerations regarding the nature and causes of life. Yet I would not introduce a compound term such as "biothanatology," wishing so far as possible to limit the study and the meaning.

Let us ask ourselves a few more questions. Does life inhere in any particular cell? In the leukocytes? In the neurons? Both are capable of stimulated activity long after the death of their host. In fact, by suitable electric stimulation, nearly all the phenomena of life may be reproduced after death, save consciousness and mentality alone. Do these then constitute life, and their suppression or abolition death? If so what about the condition of trance, or of absolute imbecility, congenital or induced—or, for that matter, what about the new-born? If life inheres in the brain, how can an acephalous monster live for a moment after birth? Or, again, how can a decapitated frog go on living for hours? Is it perhaps because the heart is *the* vital organ that the hearts of some animals will continue to palpate for hours after their removal from the bodies? Yet the animals which have lost them certainly promptly die. Suddenly stop a man's heart-action by electrocution, or the guillotine, or a bullet, and he dies, we say, instantly. Let it stop equally suddenly under chloroform and there is a period of several minutes during which it may be set going. Let a man apparently drown and this viable period becomes even longer—say a goodly fraction of an hour. During the interval is he alive or dead, or is there an intermediate period of absolutely suspended animation? And if so, in what does it consist?

Is there a vital principle? If so what is it? Is such a thing conceivable? Can such a concept prevail among physicists? Can we consent even to entertain in this direction the notion of what is so vaguely called "the soul"? Of course, those who talk most lucidly about the soul know least about it, and no man can define it in comprehensible terms; but can consideration of the soul (whatever it may be) be omitted from our thanatology? Probably not, at least by many thinkers who cannot segregate their physics from their theology. Sad it is that theology, which might be so consolatory had it any fixed foundation, should be utterly impotent when so much is wanted of it. Theology, however, has little if aught to do with thanatology.

Is protoplasm alive? If so, then why may we not believe, with Binet, in the psychic life of microorganisms? He seems to have advanced good reason for assuming that we may do so, albeit such manifestations in either direction may be scarcely more than expressions of chemiotaxis. But if protoplasm be alive in any proper sense, as it would appear (else where draw the line?), just when does it so appear and whence comes its life? If it be alive, then life inheres in the nitrogen compounds composing it, or else is an adjunct of matter, imponderable, elusive, something *un*-conceivable if undeniable. The vitalists are of late perhaps attaining an ascendancy which for decades they had lost, since they maintain that life is not to be explained by chemical activities alone. And yet it is possible to set going in the eggs of certain sea animals the phenomena of life, or to liberate them by certain weak solutions of alkaline cyanids, without the pressure or assistance of fructifying spermatozoa. In such cases life or death are determined by ionization and certain chemicals, or by their absence. Where then, again, is the vital principle? Or is it inherent in the ion, and was Bion correct when he said "electricity is life"?

The life of a cell is then necessarily quite distinct from the life of its host, nor can the latter be composed simply of the total numerical lives of its components. Some lower animals bear semidivision, in which case each half soon becomes a complete unit by itself. Others seem to bear the loss of almost any individual part without loss of life, and it is hard to say just which is the

vital part. The central pumping organ is perhaps the sine qua non, when it exists. But when non-existent, then what?

Again, while a living organism may be artificially divided into viable portions, no method seems known by which a series of separate cells may be, as it were, assembled or combined into one, of which a new unit may result from assemblage or combination. The more highly specialized or complex the cell, the more easily does it part with life, and the more difficult becomes its preservation and its reproduction. We may assume that after the death of a man his most specialized cells are the first to die, or more, that their death has perhaps preceded his own. In the ante-mortem collapse seen in many diseases and poisonings, has not this very thing occurred, i. e., that the patient has outlived his most important cells? Certainly when a patient dies of progressive gangrene he has outlived, perhaps, a large proportion of his millions of component cells. Viewed properly, what a strange spectacle is here presented! Perhaps 20 per cent. of the cells actually dead, the rest bathed in more or less poisonous media, still their host endures yet a little while. "Behold, I show you a great mystery." About which of the poisoned cells does the flame of life still flicker?

The life-giving germ- and sperm-cells may exist and persist for some time after the body dies, as numerous experiences and experiments have shown. Ova and spermatozoa do not die the instant the host dies. And herein appears another great mystery, that cells from the undoubtedly dead body may possess and unfold the potentialities of life when properly environed. Among the lower forms of life, cells but slightly differentiated go on living and even creating new organisms, though the larger organism be dead. Moreover, in what way shall we regard the division of one ameboid cell into two, equally alive and complete? Here two living organisms are made out of one, without death intervening, and by permutation alone may one calculate, through how few generations cells need go in order to be numbered by millions, without a death necessary to the process.

Thus far we have had in mind life and death in the animal kingdom alone. But most of what has been said, and much that has not, is equally true in the vegetable kingdom. Even in the mineral kingdom — as some think—the invariable and inevitable tendency to assume definite crystalline form represents the lowest type of life. Indeed, it might fall in with Spencer's definition as evincing a tendency to adjust internal to external relations, though exhibited only after such ruthless disturbance as liquefaction by heat or solution. But then, is not every disturbance of relations "ruthless," because it follows inexorable habits of Nature? Even a crystal will reform as frequently as appear certain other phenomena of life, if made to do so. Were atoms alive they would suffer with every fresh chemical change, and who knows but that they do?

But in the vegetable world we certainly have all the features of life and death in complete form: fructification of certain cells by certain others, development in unicellular form or in most profuse and complex form, a selection of necessary constituents of growth from apparently unpromising soil, and the production of startling results. Does not the sensitive plant evince a contact sensibility almost equal to that of the conjunctiva? And who shall say that it does not suffer when rudely handled? Does not the production of the complex essential oils and volatile ethers which give to certain flowers their wonderful fragrance, indicating what strange combinations of crude materials have been effected within their cells, show as wonderful a laboratory as any concealed within the animal organisms? Yet death comes to these plants with equal certainty, and presents equally perplexing mysteries. When dies the flower? When plucked and separated from its natural supply or when it begins to fade (a period made more or less variable by the care given it), or when it ceases to emit its odor? And is then death a matter of hours? When the floral stem was snapped what else snapped with it? At what instant did the floral murder occur?

Every seed and every seedling possesses marvelous potentiality of life, and so long as it does we say it is not dead; nor yet is it alive. It resists considerable degrees of heat, will bear the lowest temperature, will remain latent for long periods, and still its cells will instantly respond to favoring stimuli. Its actual life is apparently aroused by purely thermic and chemical (electronic?) activities environing it. In what do its life and its death consist?

But life and death are influenced—we say "strangely" only because it all seems strange to us—by uncommon or purely artificial conditions. Radium emanations have always an injurious effect on embryonic development. Under their influence, for example, the eggs of amphibia become greatly disturbed. Cells that should specialize into nerve, ganglion and muscle fail to develop, and consequently there may be produced minute amphibian monsters, destitute of nerves and muscles, but otherwise nearly normal. Hertwig has submitted the sperm-cells of sea urchins to these rays, without killing them, but invariably with consequent abnormal development.

The effect of cathode or *x*-rays is even more widely recognized and has been more generally demonstrated. They seem to possess properties injurious to most cell-life and even fatal to some.

Still more puzzling, and weird in a way, are the results of experiments, now widely practiced, which have to do with juggling, as it were, with ova, larvæ and embryos, by all imaginable combinations of subdivision and reattachment of parts, so that there have resulted all kinds of monstrosities and abnormalities. To such an extent has this laboratory play been carried that almost any desired product can be furnished — living creatures with two heads, two tails, or whatever combination may be decided.

Among the most remarkable of these efforts have been those of Vianney, of Lyons, who has shown that it is possible to remove the head end of several different insect larvæ without preventing their development and metamorphosis into the butterfly stage. In *Bombyx* larvæ, for example, the butterflies arrived at the mature stage, with streaked wings and beautiful coloration, but almost headless. These anencephalous insects lived for some time.

Few animals survive exposures of any length to a temperature much over 150 F., and most of them are killed by considerably less heat. Freezing has always been considered equally fatal. Gangrene is the common result of freezing a part of the human body, and that means local death. Extraordinary pains must be taken with a frozen ear or finger if its vitality is to be restored. And so even with the hibernating, or the cold-blooded animals, a really local temperature has been generally regarded as fatal.

But the recent experiments of Pictet, who did so much in the production of exceedingly low temperatures, freezing of gases, etc., have shown some startling results in the failure to kill goldfish and other of the lower animals by refrigeration. For instance, goldfish were placed in a tank whose water was gradually frozen while the fish were still moving therein. The result was a cake of ice with imprisoned supposedly dead fish. This ice was then reduced to a still lower temperature, at which it was maintained for over two months. It was then very slowly thawed out, whereupon the fish came to life and moved in apparently their normal and natural ways as if nothing had happened.

This confirms Pictet's early experiments and convictions, that if the chemical reactions of living organisms can be suspended without causing organic lesions the phenomena of life will temporarily disappear, to return when conditions are again usual. It is worth relating that his fish frozen in this way could be broken in small pieces just as if they were part of the ice itself.

How often during these recent decades when events have seemed to move faster, when discoveries and inventions have been announced at such frequent and brief intervals that we fail to note them all for lack of time, when haste and rush characterize habits alike of life and thought, do we find that we simply must stop, as it were for breath, while we unload a large amount of accumulated mental rubbish and clear a space in our storage capacity for up-to-date knowledge! It is a decennial mental house-cleaning process. We must unlearn so much of that which ten to forty years ago we so laboriously learned. We must adopt new and improved reasoning processes. But it is hard to do all this. For instance, as a boy I learned the old chemistry quite thoroughly. During a subsequent interval, when I did not need to study it, came the new chemistry and when I again required it I had not only to study a practically new science—which was not so bad—but to rid my brain of much that had really found firm lodgment there, and this was difficult or impossible. So it is with one who, having been brought up on Euclidean geometry, finds himself confronted with the comparatively new non-Euclidean, and who has then not merely to forget, but to unlearn all those fundamental axioms which seemed so plain and so indisputable, that is, if he would accept the teachings of Bolyai and others. For example, that a straight line is not necessarily the shortest route between two points shocks our Euclidean orthodoxy, and is at the same time, *to us*, inconceivable; as also that parallel lines indefinitely prolonged *may* touch, and the like; likewise the concept of four-dimensional spaces, or worse yet, *n*-dimensional. And now, in somewhat like manner and to a certain degree, must we revise our previous conceptions of death, at least to this extent: Not that we yet know much better than we did what it really is, but that we know more about what it is not. Even save, perhaps, in its instantaneous happening it is *but a step* toward dissolution, usually not the first, certainly not the last, but yet the most conspicuous.

Death is in many respects a biochemical fact. It is so intertwined with the ionic changes in the arrangement of matter that we may hope for more information regarding some of its aspects as knowledge of the latter accumulates.

But, evidently, we need to clarify our notions as we rearrange our facts. Somatic death is, after all, a most complex process. It may be shortened by instant and complete incineration, but scarcely in any other way. Even dynamite would scarcely simplify the problem. As to conscious death, that is *probably* (though not certainly) a matter of seconds only or possibly fractions of a second. While we have no accurate appreciation of what constitutes consciousness, nor even just where it resides, the central nervous system appears to be its most probable seat. But conscious death may occur almost instantly without injury to this system, as when a bullet passes through the thorax and the heart, without injuring the spine.

But what is it that suddenly checks all concerted and interdependent activity? Or does something or some controlling agency suddenly leave the body?

A recent theory having features to commend it is to the effect that life is a property or a feature of the ultimate *corpuscles* which compose the atom. Since these corpuscles bear to their containing atom a relative size comparable to that of the tiniest visible insect winging its way in a large church edifice, the intricacies of this particular theory readily appear. But it does seem as though among ourselves life has much to do with the hitherto neglected and despised nitrogen atom or molecule, since life inheres *par excellence* in nitrogen compounds. Moreover, vitality is conspicuously a feature of those chemical elements which have the lowest atomic weight, while at the other end of the table of atomic weights stands radium, of whose destructive emanations I have already spoken.

Another phase of the general subject of thanatology was suggested especially by Osler, who a few years ago called attention to the fact that but few, if any, patients really die of the disease from which they have been suffering. This is not a paradox, and needs only reason and observation to confirm it. His statement was a preliminary to the consideration of terminal infections and toxemias, which of itself would be sufficient to erect thanatology into a dignified special study. Take, for instance, a patient who has long suffered from diabetes. The end is characterized by coma, i. e., an evidence of profound toxemia, and is in large measure due to acetonemia. A patient with chronic Bright's disease dies of uremic poisoning, or one with pneumonia dies of genuine heart-failure. The terminal stage of cancer is, again, toxemia of one kind or another, according as it has interfered with digestion, with respiration, or some other vital function, or has broken down, thus saturating the patient with septic products.

This aspect of the subject will bear any amount of study and elaboration, and its mention here should be sufficient for my purpose. Accordingly as it is properly appreciated, it will be recognized as having an important practical bearing, since, if we may foresee the direction from which the final danger threatens, it may be the better and the longer averted.

Another very important and practical subject is wrapped up in this one, namely, the utilization of apparently dead, or at least of only potentially living material (tissue) in the various methods of grafting or transplantation, which are to-day a part of the surgeon's work. The methods are themselves a transplantation of experiences gained by work in the vegetable kingdom. What wonder that the marvels revealed in one department should have incited work along parallel lines in the other? That flowers and fruit of one kind may be made to grow on a tree of a very different kind excites but a small amount of the astonishment it deserves, mainly because it is now a common occurrence, though properly regarded it might seem a miracle.

Differing only in minor respect is, for example, the removal of thyroidal tissue from one human being and its implantation into another, with functional success. One may ask just here, how is this matter concerned with thanatology? And the reply is: If this tissue were taken from a fresh corpse it would be by most people regarded as dead tissue. If so, does the dead come to life? Without violating the proper scientific use of the imagination one may fancy something like the following: Let a healthy young woman meet accidental and instantaneous death. It would be possible to use no inconsiderable portion of her body for grafting or other justifiable surgical procedures. The arteries and nerves could be used, both in the fresh state, and the former even after preservation, for suitable transplantation or repair work on the vascular and nervous systems of a considerable number of other people. So also could the thyroid, the cornea, the ovaries and especially the bones. All the teeth, if healthy, could be reimplanted. With the thin bones, ribs especially, plastic operations—particularly on the noses—of fifty people could be made. And then the exterior of the body could be made to supply any amount of normal integument with which to do heterologous dermatoplastic operations, or would furnish an almost inexhaustible supply of epidermis for Thiersch grafts, which latter material need not be used in the fresh state, but could be preserved and made available some days and even weeks later. A portion of the muscles might possibly be made available for checking oozing from bleeding surfaces of others, if used while still fresh and warm, and possibly portions of the ureters or some other portion of the remains might be utilized for some unusual purpose. Then what extracts or extractives might be prepared from other parts of the body, pituitary, adrenals, bone-marrow, etc.? The tendons might also be prepared for sutures. Every one of these procedures would give promise of success, the technic being in every respect satisfactory.

But the possible limit is not yet reached, since with each kidney might be carried out experiments like those feats of physiologic jugglery such as Carrel has shown us, by implanting one, say in the neck, connecting up the renal with the carotid artery, and the renal vein with the jugular, while some receptacle would have to be provided as a terminal for the ureter.

This is, after all, not a fantastic dream, nor such an extreme picture as would at first appear, since every organ or tissue above-mentioned—and more—has been used as indicated, and with success.

But imagine the dead body affording viable products, even indirectly life itself, to (possibly) so many others! Does this complicate the study of death? And what must become of the simple credulous faith of the zealot who believes in the actual and absolute resurrection, at some later date?

There is something more than mere transcendentalism in the science of thanatology; it has a plausible medico-legal and pragmatic import. Right glad should I be if I might arouse a deserved interest in it.

How may I more fittingly conclude than by quoting a few lines from our own Bryant's "Thanatopsis":

> "Earth that nourished thee, shall claim
> Thy growth, to be resolved to earth again,
> And, lost each human trace, surrendering up
> Thine individual being, shalt thou go
> To mix forever with the elements."

Though were I minded to rehearse certain difficulties met in the preparation of this paper, which I have long had in mind, I might also add the following lines from the same poet's "Hymn to Death":

> "Alas! I little thought that the stern power
> Whose fearful praise I sung, would try me thus
> Before the strain was ended."

One may well quote, at this point, Lamartine, who asked, "What is life but a series of preludes to that mystery whose initial solemn note is tolled by death?" (On this theme Liszt built up that wonderful symphonic tone poem "Les Preludes.")

Even infinity is now questioned by the mathematicians. This being the case, where shall we, where can *we* stop?

Note.—While writing the foregoing paper there came to my notice the recent book "Death: Its Causes and Phenomena," by Carrington and Meader (London, 1911). It is interesting, but save that it contains a helpful bibliography, is of little assistance to one wishing to pursue the study from its pragmatic aspect. One of the authors is committed to a personal theory that death is caused by cessation of the vibrations which during life maintain vital activity; the other that death is, as it were, the culmination of a bad habit of expectancy that something of the kind must occur, into which we have fallen, in spite of the fact that other living beings below man undergo the same fate, though not capable of expecting anything.

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ANGIONEUROTIC EDEMA

A SERIES OF CASES WITH CLINICAL OBSERVATIONS *

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It is the purpose here to present a short series of cases which have come under my observation, with a brief summary of the views of others on the subject, and to note any salient features which the cases here published may suggest.

Case 1.—This case has been previously reported,[1] but since the time of its publication new features have arisen. A summary of the history as far as the year 1908, the date of the last publication, is as follows: A man, single, aged 24, was seen in 1905. At that time, with a previous history of no import with the exception of the acquisition of gonorrhea, he was seen with a typical macular luetic rash over the trunk. No primary lesion had ever been detected, but an intra-urethral chancre could not be excluded. Under treatment the patient ran a devious and at times most intractable course. Complications and setbacks were numerous and severe, but the most striking one was the onset and persistence of a most profound psychasthenia, accompanied by vague gastro-intestinal disturbances.

In January, 1908, he suddenly felt as though some insect had bitten him on the scrotum, and in the course of about an hour the scrotum became red, swollen many times the natural size, and the seat of a tremendous edema. The condition persisted under, and in spite of, treatment for a week, and then quickly subsided. A few weeks thereafter a similar sensation was felt by the patient, and this time the foreskin as well as the scrotum shared in the symptoms and appearance, which, to be appreciated, must be likened to the size of the edemas of those parts as seen in advanced cardiac or renal insufficiencies. This second attack subsided more rapidly than the first. There followed, at intervals of several weeks, three further attacks, in one of which the skin of the face around the eyes shared in the edema and itching. In all of these attacks antiluetic measures were of no avail, and indeed, some of the seizures

* Read at the general meeting of the San Francisco County Medical Society, Jan. 9, 1912.

1. Wiel, H. I.: The Journal A. M. A., May 16, 1908, p. 1698.

were so transitory that any extended measures were not indicated.

Course.—The subsequent course has been extremely interesting. The patient was free from further attacks for a long period, and at the same time gradually recovered from any manifestations of the psychasthenia, from which he finally emerged apparently absolutely well. In 1909 he married and in 1911 his wife gave birth to a normal and exceptionally fine child. Before the birth of the child the patient's Wassermann was taken and found to be negative.

In August, 1911, the patient came to the office to say goodbye before leaving on a journey. In the course of conversation he complained of a backache, which seemed so similar to that with which he had suffered during his many gonorrheas years ago that he said if he were not married and knew his wife to be well, he would take an oath that it was "that old clap backache." He had further assured himself that it was of no moment, because he had discovered no discharge of any kind, though his search had been merely casual. He absolutely denied exposure, and he was of such a character that his statements could be absolutely relied on. Nevertheless, he thought that as he was in the office I should examine him, which I did. To the surprise of both of us, a drop of greenish-yellow pus could be expressed from the meatus, and under the microscope a goodly number of gonococci were found. Further inquiry developed that about a week previously, after becoming overheated at exercise, the patient had wiped his genitalia, which were perspiring freely, with a towel he had picked up from the floor of a toilet. This toilet was one frequented by chauffeurs, and investigation showed that many of them were the victims of florid gonorrheas. The three-glass test of the patient's urine allowed the diagnosis of an acute anterior urethritis. The patient at once gave up his planned journey and remained to submit to treatment for the gonorrhea. Usual routine measures were employed, to which the disease responded slowly, so that after three weeks, though he was not well, it appeared as though he would be shortly. At that time there reappeared, for the first time in over a year, an attack of the angioneurotic edema of the scrotum. The skin of the left side was the site of a brawny edema, which had begun but a few hours previously, and which was itching severely. The patient then remained at his home for six days, making local applications of various antipruritics and using the ice-bag generously, which last measure seemed really the most effective in giving temporary relief. The itching was of a character so profound that it not only kept him awake, but if something did not bring immediate relief the patient would be reduced to a state of hysteria.

Sept. 18, 1911, there was a sudden exacerbation on the foreskin, and as by this time the patient had lost considerable weight and strength from the constant nervous strain, he was removed to the hospital, where a special male nurse was assigned him. Here he remained two weeks. Local applications of argyrol, calamin lotion, liquor alumini acetatis and other appropriate local measures were used with only a degree of success. In the meanwhile a severe erythema of the inner aspect of the thighs and of the region of the buttocks had appeared, accompanied with urticaria and similar eruptions. A dermatologist was called in consultation, and finally we hit on a mixture of anesthesin, zinc oxid and oil of sweet almond, which seemed to be the most effective of anything tried in giving relief. Further treatment consisted of free purgation, bland diet, with bromids and alkalies internally. The only sleep obtained was by the use of the milder hypnotics in full doses.

At the end of two weeks the patient was sufficiently comfortable to return to his home, but he left the hospital physically and mentally exhausted. The angioneurotic edema had not completely disappeared, but was subsiding, and the most intense itching was gone. The gonorrhea, however, was very active. By October 11 the skin manifestations had disappeared, over one month from the time of onset, and treatment of the urethritis was renewed.

Within one week there was recurrence of the trouble, which this time appeared as an edema and redness of the inner surface of the left thigh. During the last part of November, at a time when the patient was particularly overwhelmed with business troubles, the scrotum and foreskin again were attacked, but by this time the patient had learned how to treat the matter himself, and both of these attacks, though exactly similar in character to the severe one in the hospital, lasted but a few days each. The patient now carries in his home a full stock of antipruritics, particularly the anesthesin mixture. He reports the gonorrhea as completely well, but as he has not been seen in some weeks, that is a matter of conjecture.

CASE 2.—This patient, a married woman, aged 37, was first seen in the early winter of 1909. She complained of great pain and redness of her right little toe. The member was found on examination to be the seat of an infection, and a small pocket of pus was located around a corn and evacuated. The other toes were affected with what looked like chilblains. Following this slight operation the right foot showed in a few days an erythematous eruption which itched intensely and which spread up the leg, and was finally followed by quite a general eruption which affected particularly the other foot and the genitalia. Diagnosis was made of a pyogenic eczema. The trouble was persistent and subsided only after six weeks of great suffering.

In December, 1910, I saw the patient again, this time complaining of attacks of abdominal pain located particularly in the epigastrium, going through to the back, and sometimes seeming to have a sort of relation to eating. This pain was at times so severe as to double her up, and after lasting a few hours, would suddenly leave. Neither discretion nor indiscretion in diet seemed to have any effect on the frequency or severity of the attacks. Complete examination, clinical and physical, revealed nothing more than some tenderness in the midepigastrium, but in the light of the history, gastric ulcer and gall-bladder or duct trouble were borne in mind. The patient was put on a suitable diet and given the usual medication directed at hyperacidity or possible gastric ulcer. Urine, blood and feces had been examined and, with the exception of a slight leukocytosis during one attack (12,000), no abnormalities had been detected. Gastric analysis was refused by the patient, who was an extremely neurotic person and feared the procedure.

Four days after this examination I was called to the patient at midnight because of her lips having begun to swell during the day, and by that time having reached a size sufficient to disfigure her. This had alarmed her to such an extent that she had become hysterical and was suffering not only from that but from a sensation as though there was a ball in her throat which she feared would suffocate her. At a glance it could be seen that there was a large edema of both lips, and as one looked at them it was quite plain that their size varied from moment to moment. In the light of her extreme neurotic habitus (a condition fostered by her environment) and her present state of hysteria, the diagnosis of an angioneurosis seemed justified, especially since other sources of the edema, such as cardiac, renal or inflammatory, could be eliminated. The patient was reassured as to her condition, hot compresses applied to the throat, thorough purgation instituted, and alkalies used internally. In four days an urticaria developed on the arms and around the vulva, which cleared up in a few days. This development strengthened the confidence in the correctness of the diagnosis. It was, furthermore, strongly suggestive that the attacks of abdominal pain were of angioneurotic origin, and that this was a case strongly similar to the group emphasized by Osler.

The patient then remained free from discomfort for two months, though at no time during this period did she feel in the best of health. After this interval, on April 27, 1911, I was called to see her; she complained of "gas pains" and considerable soreness in the upper abdomen. For the first time the rectus over the gall-bladder region was found to be somewhat rigid. The leukocytes were then 5,000. The following day her lips were again the seat of a large edema and accompanying it was an erythematous eruption on the arms and fingers. Succeeding this there came an edema of the vagina; there was a slight rise in temperature (100 F.); the pains

became sharper around the right costal margin, and a slight jaundice became evident, with the concomitant finding of considerable bile pigment in the urine. At this period the leukocytes were 15,000.

These troubles subsided, but during the following month she suffered a violent attack of colic with jaundice, fever and intense itching of the skin. She was warned of the imminence of surgical interference, and on June 25, 1911, after a fulminant attack of biliary colic, the abdomen was opened. The gall-bladder was found to be shrunken and hour-glass shaped, owing to a band of organized tissue the result of old inflammation, and each portion of the hour-glass was further divided into loculi by bands of a similar character. Most of these loculi contained very small mulberry stones, and at the bottom of the lower compartment were found several larger ones of a similar type, the largest about 1 cm. in diameter and wedged tightly into the opening of the cystic duct. The common duct was explored as far as possible and found to be free of stones. The patient made an uneventful recovery and in three weeks was again on her feet.

Her improvement, subjectively and objectively, after the operation was remarkable. All attacks of abdominal pain vanished, and she was apparently well. Sept. 28, 1911, three months after the operation, she had an attack of what seemed to be a giant urticaria on the chest and fingers. Her menstruation was delayed some days at the time, and with its onset the next day this symptom disappeared. Other than that whisper of trouble, the patient has been in perfect health and is apparently permanently well of her various symptoms.

Case 3.—This patient, a married man, aged 29, with a previous history of no importance, was first seen in 1908, a few hours after having been awakened by a most severe attack in the lower portion of the abdomen. Examination disclosed nothing more than some definite tenderness on deep palpation in the right iliac fossa. The temperature was normal and the leukocytes around 10,000. A tentative diagnosis of appendicitis was made, the patient given starvation treatment with rest in bed, and in a few days he was well. There was no further trouble for two years; then he complained of dysuria and polyakyuria. Another examination disclosed absolutely nothing. Two months later I was called to see him again, another attack of severe abdominal pain being in full swing. This time there was some rigidity of the right rectus accompanying the tenderness in the right iliac fossa, but the temperature was 98.6, the pulse 72, and the leukocytes 10,000, so operation, though advised, was not insisted on. Recovery from this illness was rapid.

Shortly after this the patient was seen several times with urticaria, and it should be mentioned that, his habitus being extremely neurotic, amounting to at times a neurasthenia, a factitious urticaria of extreme grade could always be easily elicited.

Three months after the attack of colic above mentioned, I was called one night to see the patient, who had become extremely alarmed over the appearance that morning of great enlargement of his lips, which had by that time become many times their normal size and gave considerable discomfort. Their appearance was exactly that described in Case 2. He was assured that the trouble was of nervous origin, the proper local and general treatment was instituted and in a few days he was well, with the exception of herpes which had become superimposed on the edema.

Since then there has been no recurrence of either the angioneurotic edema or the abdominal pain, but we were inclined to regard the two as being of the same origin.

Case 4.—The patient, a man aged 26, single, was seen in December, 1910, who almost, if not entirely from birth, had been a victim of von Recklinghausen's disease (multiple neurofibromatosis) and presented typically the characteristic triad, viz., multiple neurofibromata, pigmentation of the skin, and mental deficiency. He complained at this time of loss of weight and strength, at times spitting blood, and the presence of distressing cough. Examination disclosed the presence of advanced pulmonary tuberculosis, and outdoor treatment combined with the intravenous administration of Old Tuberculin (bovine), was instituted. Gastro-intestinal symptoms were prominent in this case, and the course run, combined with frequent examination, made it almost certain that there was inflammatory trouble in the region of the appendix, very possibly tuberculous in nature.

Throughout this history it must be remembered that the patient's mental deficiency was such that, though it made him backward in comprehension, it made him all the more querulous, whiny and concerned about himself, so that he was in a constant state of worry and fear.

Under treatment the patient made most satisfactory improvement for six weeks, gaining many pounds in weight, looking infinitely better and pulmonary symptoms making great progress. This continued until April, four months after the beginning. There then occurred a most severe herpes zoster on the right side of the chest, the symptoms of which were most intractable to any treatment, so that the patient was half crazed with the suffering. This gradually subsided but left the patient in poor condition, he not only having lost all the improvement originally gained, but even more than that. His condition at that time was not one to inspire hope.

One month later he noticed that his scrotum was itching. One night, on arising to walk to the lavatory across the hall, he was seized with violent abdominal pain and fainted. I was called at once. Rigidity and tenderness over the appendix region were extreme, pulse was 108, temperature was normal. The entire genitalia were enlarged tremendously with an edema so great so as to deform the penis almost beyond recognition. The regions nearby were the seat of a papular eruption and the whole area in the vicinity burned and itched severely, the itching on the genitals being fulminant. He was given scopolamin (hyoscin) hypodermatically and was removed to the hospital. There the leukocytes were found to be 20,000, and the abdominal signs persisting, consultation was held as to the advisability of operation. His general condition being at that time so low, and the appearance of the edema of the genitals and presence of von Recklinghausen's disease making it possible that the whole thing might be neurologic, operation was deferred, and the patient gradually recovered from the acute abdominal condition. During the recovery he ran a typically tuberculous temperature and the mental condition retrograded so as to amount at times to a mild delirium. The edema ran an obstinate course and subsided only after two weeks, being accompanied with varied erythematous, papular and urticarial eruptions of other portions of the body.

As soon as the patient was in condition to be removed he was taken to a southern sanatorium, where he since ran a devious and downhill course indicating general tuberculosis, death occurring Dec. 14, 1911.

Case 5.—The patient, a man, aged 25, married, had been seen by me on several previous occasions during the past year, complaining of dull abdominal pain associated with general malaise and some loss of weight. Complete physical and laboratory examinations had been made. Physical examination had disclosed some tenderness on deep palpation over the appendix region. Leukocytes had never exceeded 12,000; there had been no fever, and clinical examinations disclosed nothing further than a delay in the cecum emptying, shown by a series of radiographs.

On this occasion, Sept. 20, 1911, his penis in the morning had become tremendously swollen. There had never been any venereal trouble and the present examination revealed none. The skin of the penis below the glans was the seat of an advanced and marked edema, red and quite painful. The puffiness of the skin was so extensive as to curve the penis into an S-shape. Examination elsewhere revealed nothing abnormal with the exception of point tenderness above the left groin, where, however, there was nothing to be felt, but where the skin was red and slightly edematous. This shortly became affected similarly to the penis, and a like edema appeared on the inner surface of the upper right thigh. The next day the skin of the right hypogastrium, in an area about 5 cm. in diameter, became red and markedly swollen with edema, and in this situation could be felt a freely movable tender subcutaneous nodule about 1 cm. in diameter. There was nothing of further interest to note concerning the

findings in the case. The patient was put on calcium lactate, thoroughly purged, ordered a bland diet, calamine lotion locally, and in a week the manifestations had disappeared. There had been no history of the eating of any of the rash-producing foods, such as shellfish, strawberries, etc. The patient having been recently married and indulging in almost daily intercourse it was thought that there might have been a mechanical etiologic factor in the edema of the penis, but naturally that would not have accounted for the edema elsewhere.

A bird's-eye view of these cases proves of great interest. Case 1 presented angioneurotic edema, urticaria, erythema and allied eruptions in a psychasthenic with a history of lues, with indefinite gastro-intestinal features and complicated by the presence of gonorrhea. This, however, could not be determined to play a definite part in the angioneurosis, as similar attacks had occurred before the advent of the urethritis. It could almost certainly be excluded that lues was the *causa peccans*, for antiluetic measures were of no avail, and the last attacks occurred in the face of a negative Wassermann (which, of course, is not absolutely conclusive), and some years after any other manifestation had occurred.

Case 2 was perhaps the most interesting of the group. It presented angioneurotic edema, urticaria, erythemata and allied eruptions in combination with severe abdominal colics. It might well have been considered that the colics were abdominal manifestations of the erythema symptom-complex, similar to the large series of cases which Osler[2] has brought under one head. This was the view taken, but when the abdominal features later became localized to the biliary tract, the diagnostic problem became more involved. It was even possible to conceive of an angioneurotic edema of the bile-ducts, in the light of the intestinal edemas found in some of Henoch's[3] cases, and in a case reported by Briggs.[4] This was the only case of the series in which operation allowed of a certainty in illuminating the pathology.

In Case 4 we had angioneurotic edema in a patient suffering from von Recklinghausen's disease and pulmonary, if not general, tuberculosis. The edema was associated with severe colic, as in Case 2, these features being localized clinically and physically to the region of the appendix. It is reasonable to suppose, however, that an actual acute appendicitis, with the blood-picture and of the severity here present, would have progressed rapidly to a fatal end. The diagnostic problem in this case was urgent, for it was a question of surgical interference. Events proved that non-interference was justified from a clinical standpoint, but it seems questionable whether the pathologic reasoning will ever be proved.

In Case 3 the patient presented angioneurotic edema, urticaria and allied eruptions, combined with a history of colic of obscure etiology. The appearance of the edema was considered of sufficient moment to contraindicate operation, or at least to make its postponement justifiable, and the future course of the case points to that decision having been reasonable.

Case 5 was quite similar to Case 3, in that the patient presented angioneurotic edema in combination with indefinite abdominal symptoms, with a remotely possible mechanical factor for the edema.

Taking these cases as a group, one finds angioneurotic edema, urticaria and allied skin manifestations associated with gastro-intestinal symptoms, most particularly abdominal pain. In three of the five cases (Cases 2, 3 and 4) the association was quite definite, and in Case 2 the abdominal pain was quite clearly shown not to be an angioneurosis, but of inflammatory origin. The definiteness of the association in this case would reasonably lead one to conclude that the angioneurotic edema in this case rested on the presence of gall-stones.

Another feature which the group had in common (with the exception of Case 5) was that each patient was of an extremely neurotic habitus, Patient 1 being profoundly psychasthenic, Patient 2 being definitely if only moderately so, Patient 3 being what is usually termed neurasthenic and Patient 4 being at times actually beyond the border-line of sanity.

Furthermore, one is struck by the angioneurotic edema appearing in patients suffering from a variety of conditions: von Recklinghausen's disease, tuberculosis, lues and gonorrhea, and cholelithiasis. One is almost forced to the attitude that the skin manifestations, instead of being a clinical entity were merely symptoms, or at most complications of other pathologic entities.

Fitting in with the experience of others who have published reports of similar cases, the angioneurotic edema here met with was characterized, furthermore, by its tendency to recurrence, its involvement, for the most part, of the skin of the face and genitalia, and by intense itching which proved most intractable to treatment. Along therapeutic lines, what struck me most forcibly was that a measure which might be successful in one case would be totally ineffective in another, and what might bring considerable relief in one patient during one attack might completely fail in the next. The measure found of greatest use externally were compresses respectively of solution of aluminum acetate, argyrol (20 per cent.), boric acid, calamine lotion. In Case 1 a certain preparation had such marked and immediate benefit that for the sake of those who may have to treat these conditions, and have run the gamut of the pharmacopeia in their efforts (and our therapeutic inefficiency is shown by our often having to run that gamut), the composition is here given:

℞

Anesthesin	1 part
Zinc oxid	1 part
Lime-water	8 parts
Oil of sweet almonds	16 parts

M. Sig. Local use in generous quantity.

Cases similar to the above are reported in the literature singly and in groups. The original description of the symptom-complex is usually accredited to Quincke,[5] and the name "Quincke's disease" is often used in and out of print in this connection. His description is the first conscious one of the disease and he regarded the condition as a vasoneurosis during which the permeability of the vessels is increased. This, of course, is merely paraphrasing the term "angioneurotic edema." A very clear description of the condition, which antedates that of Quincke, is from the pen of Graves,[6] whose name we know so intimately elsewhere in medicine. He describes a typical case of angioneurotic edema of the forehead and eyelids in a gouty individual. Apparently Graves did not recognize the nature of the phenomenon, for he speaks of it as a most remarkable instance of fugitive inflammation occurring in a person suffering from a gouty diathesis. He lays particular stress on the occurrence of sudden death — an observation common also to other authors — and, when occurring, being due to angioneurotic edema of the larynx. Osler's most

2. Osler, William: Am. Jour. Med. Sc., 1895, cx, 629, and 1904, cxxvii, 1.
3. Henoch: Berl. klin. Wchnschr., 1874, No. 51.
4. Briggs: THE JOURNAL A. M. A., Feb. 15, 1908, p. 528.
5. Quincke: Monatschr. f. prakt. Dermat., July, 1882.
6. Graves: Clinical Lectures, Dublin, 1848, i, 462.

masterly and systematized collection of cases presents, besides the abdominal manifestations, the familial tendency. One of the most excellent accounts in the textbooks is that by Joseph Pratt (in Osler's Modern Medicine, Vol. IV), who sums up the prevalent conception of the disorder as follows:

> Angioneurotic dermatoses are characterized by a marked disturbance of vascular tonus in addition to a more or less pronounced inflammatory condition of the skin. . . . This sensitiveness of the skin and the abnormal reaction are the result of a general angioneurotic disturbance.

Most of the writers who have concerned themselves with this matter have regarded the angioneuroses as a disease, and in many of the cases reported it appears conceivable that it may be so. In the group here reported it seems clear enough that the angioneurotic edema was not the disease in each instance, but an accompaniment and complication of other diseases of a varied nature, but all characterized by gastro-intestinal disturbance of some sort. In that light one might well think, with some of the observers, that a toxemia of intestinal origin might be at the bottom of the whole matter.

All certainty in the solution of this problem must wait on some exact means of approaching the subject clinically or experimentally, and it may be that working along the lines of anaphylaxis we may approach something definite. Until we can have something more exact than at present on which to proceed, the putting forth of any conclusions in the matter can be nothing more than "arm-chair philosophy," but nevertheless the recognition of the condition is of great interest and of considerable importance when the cases, as often happens, approach the surgical domain.

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THE VALUE OF PERIODIC PHYSICAL EXAMINATIONS *

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The ordinary case-history begins with a statement of the complaint of the patient, following this is a detailed account of the family and personal history, the physical examination and the result of chemical and microscopic analyses, serum and toxin reactions, and bacteriologic findings. The incentive, the key, is the insistent complaint of the patient.

Medical science has long been active in the prevention of disease in connection with public health measures, but has been notably negligent in prophylaxis as applied to the individual. The fields of the various specialties of practice have in this individual relationship been restricted to diagnosis and treatment of disease only when the disease has reached such a grade of seriousness as to produce pain or unpleasant symptoms.

The case records of internists, surgeons and other specialists, as well as the general practitioner, contain no data of observation or investigation prior to this period of symptom-onset. This condition is destined to change, for by the time symptoms demand treatment, the records should show the results of repeated examinations, with special attention directed to any variation from normal as revealed by answers of the patient or the findings in the successive routine examinations.

* Read before the Interurban Academy of Medicine at Duluth, Minn., Jan. 31, 1912.

The lack of such periodic examinations is partly due to the carelessness and ignorance of the laity, but, I believe, primarily to the indifference of the medical profession to this most important branch of practice. The inspiration for such prophylactic routine must come from the medical fraternity primarily, and cannot be expected to originate with laymen who could not, unless instructed, appreciate its importance. Against the argument that no matter how strongly it was urged, people would not come to physicians for examination until compelled by symptoms, we need only consider the example set us by one school of specialty—the dentists.

Nothing could have been cruder than the attention paid by the laity prior to forty years ago to dental prophylaxis. Until the aching tooth became unbearable, nothing was done, and then it was usually too late to save it; and when pyorrhea loosened the teeth until they fell out, a false set was put in. Now we all think it serious neglect not to have our teeth looked over once in six months and the smaller cavities filled. The patients of the more advanced dentists are presenting themselves once a month, and have the necessary attention before the cavity starts. There are many young people now, from 20 to 30 years of age, who have had the benefit of such service from the more advanced dentists, who have not a flaw in their enamel. These people will keep their teeth in excellent condition till old age, provided their medical advice is as sound, and the degenerative changes in heart, blood-vessels and kidneys as wisely averted. Their problem is not, as with former generations, to preserve a masticating surface as long as they live, but to live as long as their teeth keep in good condition. An advanced dentist regularly advises his patients to present themselves and to bring their children to him at frequent intervals without regard to toothache or evident disease. Few physicians give their patients the benefit of similar protection. This neglect of proper prophylaxis is nowhere so frequently seen or more strikingly illustrated than in the course of routine insurance examinations. In this work we do not ordinarily see applicants who are at the same time patients under active treatment for some symptom. Those constitute the small percentage of attempted fraud cases, and are not of serious moment to the companies. But how frequently we see men in their prime, or what should be their prime, in active business, in apparently robust health, in whom we find a high blood-pressure or albumin and casts! These men may even have been within the year to their medical adviser, who made light of their complaint of headache or dyspepsia, and dismissed them with a prescription, but without a urinalysis; or again, a young clerk or teacher, with an evening temperature of 99.5 to 100.5 F., who, on close questioning, admits perhaps that he did go to a doctor complaining of feeling tired, but the "tonic" so promptly prescribed did not seem to be of benefit.

Most of these persons, however, have not consulted a physician in years—never thought of it. Some have dropped into the doctor's office and had themselves laughed at and called neurasthenics. Many people have great hesitancy in consulting a physician unless they have a compound fracture or have vomited blood. This does not reflect credit on their medical adviser. The man who speaks slightingly of the number of neurotics he has to see daily and satisfy with a placebo (unless he is a popular nerve specialist), is undoubtedly overlooking with great regularity many cases of organic disease which will return to him after serious damage has been

done, or more likely go to some one else better equipped in judgment or training to meet their needs.

When we consider the large number of men in our profession who have graduated from cheap commercial schools without requirement of preliminary education and whose diplomas carry no guarantee of medical knowledge, is it any wonder that many phthisical patients have been treated as dyspeptics, or soaked with quinin until the curable stage was passed; that many cases of disturbed renal function have drifted without any treatment into chronic Bright's disease; that many gall-stone and chronic appendicitis cases have been treated for biliousness, until the gall-bladder was irreparably damaged or the appendix ruptured?

Let us not on this occasion dwell further on the unpleasant theme of the just accusation brought against us of the sins of omission. Let us turn to the broadening field of service which lies before us.

Within a week I have heard the dean of one of the best medical schools in the country express discouragement at the opportunities for the large number of physicians who are being graduated every year in this country. There is no excess of well-trained physicians; there is instead a dearth of them. We are overrun with a multitude of incompetent practitioners of drugging, but there is a great want of competent practitioners of medicine in the broad sense of the word. Viewed from the point of view of supplying a curative antidote, and excluding surgery, the scope of medicine might seem at first glance to be contracting through its own efforts. One at once argues for quinin in malaria—but how many years will malaria remain in this country or any civilized country? Certainly its life is limited to a few decades. Or mercury or salvarsan in syphilis; are we too optimistic in believing that the development of a higher social standard will limit even this scourge? Antitoxin in diphtheria; serum and vaccine therapies in general—these are apparently only applicable to infectious diseases, and surely our hope is not unfounded that the day of their control and elimination is coming.

How far public health measures will limit the scope of the surgeon can only be surmised. Certainly the stamping out of typhoid will reduce gall-bladder inflammation, and some bone conditions. The end of the white plague will further limit the field of orthopedic, neck and abdominal surgery. Clean, dustless streets will play havoc with aural surgery.

With the elimination of infectious disease, where will the physician find his field? He will then be compelled to fill the position for which he is primarily intended, and which some of our colleagues are filling to-day. He will be the guardian of the health of his families, not a last resort in disease; a therapeutic agent who finds himself employed to overcome structural changes beyond the reach of any help.

The modern attorney of our more advanced institutions is not a last resort in time of trouble; he is the constant adviser of the firm, employed to keep them out of trouble. When an actual law-suit is brought, the wise lawyer often admits the inadequacy of the law to obtain justice, and advises compromise. If while waiting in a dentist's anteroom one was surrounded by patients toothless, or with broken, decayed teeth, one would not be apt to wait one's turn. The general practitioner of the coming generation will be the family counsellor in matters of health. He will know each individual in their physical, moral and mental aspects. He will know the hereditary influences which he cannot alter, and will be conversant with the environment which he can largely determine. This physician will be notable by the number of healthy families for which he is adviser, not, as at present, by the number of diseased individuals who surround him.

Much can still be done toward the prevention of infectious diseases in the individual, but that field is comparatively shortlived. Public hygiene in able hands will make individual precautions unnecessary; but in preventing, forestalling, postponing the onset and development of the chronic degenerative changes which finally determine the fate of all who escape the infectious diseases, there will always be a fertile field for the most highly developed training, judgment, and forceful ability.

The chance insurance examination is now about the only safeguard enjoyed by the average man against the progress of organic changes to a degree of seriousness such that they force themselves on his attention.

The limits and purpose of this paper do not permit a full discussion of the benefits which would accrue to the individual from an intimate relation, throughout his lifetime, with a wise medical adviser. Yet even antenatal care deserves at least a word, as it is receiving such wide attention at this time under Holt's stimulus.

During pregnancy proper medical advice along the lines of general hygiene, particularly a restricted diet, and sufficient exercise for the well-to-do, and a full, nourishing diet and sufficient rest for the working woman, will play no small part in the health and longevity of the offspring.

From the hour of birth children struggle against the errors of ignorance on the part of mothers, and we must confess that the family physician could do far more than he does to prepare the mother for this central duty of her life, of which she often knows least. When we talk, as we all talk now, of the fearful toll in infant mortality paid to ignorance, how much of the blame for this should be laid at the door of the medical profession, not as a class—for we are a unit in the fight against dirty milk, etc.—but as individual practitioners? Is the mother as carefully and patiently taught the dangers which the coming summer holds for the baby as she should be? Does she know that even if clean milk is not obtainable, she still can probably prevent a serious disorder by nursing her child, by pasteurizing or sterilizing dirty cow's milk, by regular feeding of proper dilutions and proper substances? The mother is more anxious than any national association can be to prevent infant mortality in her own family, but she is not a physician—and we are so busy with sick people that we have no time to teach her.

We must pass over the period of childhood and adolescence, when the constant advice and guidance of a well-trained physician would be so invaluable in the establishment of that personal physique and that knowledge of hygiene by which success in life must be largely measured, whether as a man in the pursuit of material advancement, or as a woman in home and family development, or for either sex that moral and temperamental control which is so largely dependent on normal organic structure and function. Yet consider a moment the prevention of venereal disease, which is a live question to-day, the crucial difficulty being a practical method of instruction; how largely this would be solved if the boy were accustomed to regular conferences with the family physician and eager for his guidance in matters of physical development, in which all normal boys are interested!

Although infectious diseases are on the decline, some being already extinct in civilized countries, and many having ceased to be a serious problem, and although the present century will probably see properly conducted communities largely rid of their menace—people continue to die, and our attention is being more and more forcibly directed to the increasing incidence of the chronic degenerative diseases which shall some day practically monopolize the field. As the chances of an early death from an infectious disease diminish, normal life expectancy will increase, and a death at 60 or 65 of Bright's disease or heart disease will be regarded as far more premature than it would be to-day. So many die of infectious diseases before 45 that, relatively, 65 seems an advanced age. We must remember in this connection that not only are infectious diseases responsible for their immediate fatalities, but in many cases they are primarily responsible for the inauguration of chronic changes which may not result fatally for some decades. Syphilis, for example, reaps its richest harvest two to four decades after the primary infection; typhoid has been shown by Thayer to produce permanent arterial changes; tuberculosis causes renal irritation; and many "cured" of phthisis die of Bright's disease begun during the tuberculous toxemia. Scarlet fever, rheumatism, tonsillitis—in fact, probably all infectious diseases—leave, in many instances, structural changes which persist and develop long after the febrile period is forgotten.

Without further consideration of the other varied causative factors, we do know that in many individuals there begin to appear, not often before the fifth, more often during the fifth or sixth decade, certain, at first very slight, evidences of chronic degenerative changes which presage the death of that individual. A careful examination will reveal these signs usually long before any symptoms have obtruded themselves.

It is the evidences of chronic degenerative changes which could be noted early by routine semi-annual examinations, before serious damage was done, and which are so often found in insurance examinations, in all stages, from the slightest traces to such gross findings that one wonders how the man can continue at his work — on which I would lay emphasis. A further restriction is also necessary, and we will consider here only such signs as are presented by a few elementary methods of urinalysis and cardiovascular examination.

As individuals there is no constant factor in occupation, in locality of residence, in habits, in general health, in personal appearance, to which we can ascribe the difference in clinical findings. They may be men in active careers, in vigorous health. What does it signify that in one we find soft arteries, a low pulse tension, a normal area of cardiac dulness, regularity in cardiac rhythm, clear, normally accentuated heart sounds, no trace of albumin in a twenty-four-hour specimen, no casts on microscopic examination? These are but seven factors in a clinical examination, and yet they speak forcibly for a cardiovascular and a renal system which shows no evidence of impairment after five decades of service—good material, we may venture, and not subjected to intoxication or undue strain.

In another man, with equal health and equal vigor, we find a thickened artery; in a third, high tension; in a fourth, cardiac hypertrophy; in a fifth, an occasional break in cardiac rhythm; in a sixth, an accentuated second sound or an impure first sound; in a seventh, a trace of albumin; in an eighth, a few hyaline and granular casts. These signs may be single or combined in any variation. Usually, at least two are present in any one case. They argue for impairment of cardiovascular or renal structure, and we know well the dictum: "A man is as old as his arteries." These men have no complaint—they are not patients; and yet we cannot avoid the conclusion that a structural change has been inaugurated which, unless arrested, will seriously shorten the expectancy of this group. An advance in age of from ten to fifteen years would in all probability not more than cover the shortened expectancy.

The individual, however, can in many cases regain practically his normal expectancy provided he institutes proper measures, and provided the tissue-change has not proceeded too far. The following case is such an example:

A successful business man, aged 48, in apparently robust health, just accepted by another company for $50,000 insurance. At examination, blood-pressure was 160 mm. of mercury; area cardiac dulness increased to nipple line; faint trace of albumin, an infrequent hyaline and granular cast. The application was postponed. The man at once put himself in the hands of a well-trained physician, and under proper diet, exercise, elimination, less mental fatigue and worry, his blood-pressure returned to 135; albumin and casts entirely disappeared and have not returned during the year; the area of cardiac dulness has retracted at least half an inch. This man would be pronounced normal to-day, and should have regained practically his normal expectancy, barring a possible tendency to a recurrence.

No man should be passed by an examining physician as a first-class insurance risk in whom any of the above-mentioned seven signs remain constant. As a corollary, every man should submit himself at least twice a year to a searching examination for the discovery of any of these signs of cardiovascular or renal impairment. If they are found, the indication should be followed by a proper regimé aimed at a restitution of structure, or at least an arrest of the degenerative changes.

Northwestern National Life Insurance Building

THE DIETETIC AND THERAPEUTIC VALUE OF FERMENTED MILKS PREPARED FROM COMMERCIAL FERMENTS

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The optimism of Metchnikoff in regard to the value of fermented milks seems to be shared by recent writers. Yoghurt, the Bulgarian sour milk, has been given special notoriety, and manufacturers, taking advantage of public sentiment, have flooded the market with preparations, good, bad and indifferent. These preparations are supposed to produce a milk which is similar to Bulgarian milk in palatability, nutritive value and health- and life-preserving properties. Exact scientific investigations are scarce and it is difficult for practitioners to decide on the merits and demerits, not only of the commercial preparations, but also of the therapeutic value resulting from the use of these milks. Some of the articles published appear to be written in the interest of the manufacturers and it would seem that an impartial discussion may be of practical value.

The subject may be considered from three points of view: (1) the nutritive value of fermented milks for adults and infants; (2) the therapeutic value; (3) the efficiency of commercial ferments.

Fermented milks may be divided into two classes, namely, those which have been subjected to acid and alcoholic fermentations and those which have been subjected to acid fermentation only. The chief representatives of the first class are kefir and koumiss. They are the result of the combined activity of several bacteria and yeasts. The milk-sugar is fermented, and alcohol and carbon dioxid are produced, with enough acid, chiefly lactic acid, to impart a pleasant sour taste. The casein and albumin are precipitated and partly split into soluble compounds. A sour, effervescent beverage is produced. The milk constituents are rendered more digestible, although there is loss of nutrient substance by the formation of gases and acids. These preparations are used to a considerable extent as food for invalids and for babies unable to digest fresh milk. Many favorable accounts of success are recorded in the literature; still objection can be raised against the validity of these statements, since the observations have not been controlled, and, in truth, control observations are difficult to obtain. Kefir contains very little alcohol, but koumiss contains often more than 3 per cent., and it is at least doubtful if the presence of alcohol is advantageous in the nourishment of invalids and babies. It is advisable, therefore, to use these fermented milks with caution.

Of greater importance are those milk beverages and foods in which an acid fermentation is the chief factor. The acid fermentation in some cases is accompanied by aroma formation and slight changes in the milk-fat. Such fermented milk is used in Asia, Africa and the eastern countries of Europe. In this country ordinary butter-milk is popular and the Scandinavian people have a thick fermented milk called *Tätemelk* (*Kjernemelk*). The most interesting of these milks is yoghurt, which has been recommended by Metchnikoff and by many others recently. Yoghurt originated in Bulgaria and is prepared in the following manner: Milk is evaporated in a clean vessel to about one-half its volume over a slow fire. It is then cooled to 45-50 C., and inoculated with the ferment "Maya," which is a small remnant of a previously prepared lot. The ferment is thoroughly mixed by stirring and the vessel wrapped in skins and cloths so as to maintain the desired temperature. At lower temperature abnormal fermentations cannot be avoided, since the ferment contains many microorganisms. The chief agent is the Bulgarian bacillus, whose optimum temperature is about 45 C. The milk is ripe after from ten to twelve hours. The finished product has the consistency of pudding and is eaten mixed with ground bread or sugar. The milk, having been evaporated to one-half its volume, contains twice the original amount of solid constituents. There is nearly 10 per cent. milk-sugar which imparts a sweetish taste to the milk. The acidity is 0.8 to 0.9 per cent. The milk has a sweetish-sour taste and a pleasant aroma. It is claimed by some analysts that about one-half of the protein is rendered soluble. This is probably exaggerated, since there is hardly time enough during the short period of fermentation to accomplish this as the Bulgarian bacillus has feeble proteolytic properties. The digestibility, however, is probably enhanced by the precipitation of the casein, the coagulum consisting of extremely fine particles and the curd being smooth and liquid.

Yoghurt as prepared in Bulgaria is rarely met with in this country and western Europe. The "yoghurt," or "Bulgarian milk," sold in these countries is prepared from sweet whole milk or from partially skimmed milk. Generally the milk is boiled, cooled and inoculated with a tablet or a liquid culture as the case may be. The temperature of incubation varies, used by different producers, from 75 to 105 F. The sanitary advantage of boiling the milk is obvious, and abnormal fermentations are avoided. The "cooked taste" is covered up by the acid formed during the fermentation. The finished product is a smooth, white, rather thick and somewhat viscid fluid of pleasantly acid taste and peculiar aroma. The taste appeals to many who do not care for ordinary buttermilk.

The nutritive value of this milk is nearly the same as that of sweet milk of the same fat content. A small amount of milk-sugar is lost by acid formation. The casein, forming a fine, smooth liquid curd, is easily digested. This fact and the palatability render the Bulgarian sour milk superior to ordinary buttermilk.

As food for infants and invalids Bulgarian milk and ordinary buttermilk have the advantage over sweet milk of somewhat higher digestibility. Too much stress, however, should not be laid on this, as the difference is but slight. It seems that the fat in cow's milk is the most objectionable constituent and frequently the cause of digestive disorders in infants and invalids. It is probable that sweet skimmed milk will be tolerated as well as sour milk prepared from skimmed milk. The successful assimilation of sour milks in place of sweet milk has been reported by many, but it may be due to the diminished fat content as much as to the altered condition of the milk.

The chief interest centers about Metchnikoff's assertion that the presence of *B. bulgaricus* in the digestive tract prevents premature senility, auto-intoxication and other disorders. This claim has been augmented by other workers and commercial producers of sour milk and ferments. According to repeated statements, stomach troubles, scarlet fever, whooping-cough, anemia, scrofula, gall-stones, diabetes, chronic rheumatism, dysentery, appendicitis and tuberculosis can be cured by the use of yoghurt. This is but a partial list of the diseases mentioned as curable by Bulgarian milk. It is not surprising that with such statements in scientific and semiscientific articles, manufacturers are advertising their products with extravagant claims of benefits derived from the use of yoghurt. It is stated that the explanation of the wonderful accomplishments of the Bulgarian bacillus lies in its power to destroy all pathogenic germs in the digestive tract, that colon bacilli and putrefactive bacteria are restrained or destroyed and that with the destruction of these organisms auto-intoxication is impossible and premature senility will be prevented.

On the other hand, we find articles which are cautious and conservative. Luerssen and Kühn[1] often missed Bulgarian bacilli in commercial tablets and have arrived at the conclusion that the possibility of altering the bacterial flora of the intestinal tract by the use of tablets or Bulgarian sour milk is highly improbable and that the bacilli cannot be located permanently in the colon. Sewerin[2] also failed to find Bulgarian bacilli in lactobacillin. Spiegel[3] stated that the therapeutic value is at least doubtful and that the evidence of the therapeutic value of Bulgarian milk or tablets is insufficient. Oehler[4] has published the results of a series of feeding-experiments with mice and monkeys. The animals were fed with Bulgarian sour milk for eight days and the author was unable to detect any difference in the intestinal flora before, during and after the treatment, excepting that

1. Luerssen and Kühn: Centralbl. f. Bakteriol., Part 2, 1908, xx. 234.
2. Sewerin: Centralbl. f. Bakteriol., Part 2, 1908-9, xxii, 3.
3. Spiegel: Reichsmedizinal Anzeiger, 1911, p. 664.
4. Oehler: Centralbl. f. Bakteriol., Part 2, 1911, xxx, 149.

Bulgarian bacilli were found while the animals were fed with sour milk. Two or three days after feeding was discontinued, however, Bulgarian bacilli could not be found. This is in contrast to repeated statements, according to which the intestinal flora is changed and Bulgarian bacilli are permanently located in the digestive tract. Some investigators do not seem to realize that with modern bacteriologic methods only living bacteria in feces are demonstrated. More than 90 per cent. of all bacteria leaving the intestinal tract are dead and we cannot expect to find even approximately the same number from day to day by bacteriologic technic. The reduction in numbers reported by some authors and ascribed by them to the influence of the Bulgarian bacillus has no significance.

In an extensive study of commercial ferments[5] I found that most commercial preparations do not contain Bulgarian bacilli and are worthless for the preparation of Bulgarian sour milk. These findings are in accord with our knowledge of the fate of bacteria when dried. Although they may resist desiccation for considerable periods, which vary in length with different species, bacteria are more or less inactivated in time and are then easily overgrown by contaminating organisms. Commercial ferments should bear a stated time, after which they should be considered useless. There is no difficulty in determining the time limit of efficiency.

Descriptions given by some authors seem to show that they have not worked with the true Bulgarian bacillus. The following characteristics may serve as a criterion for those interested: The Bulgarian bacillus is a long bacillus of varying thickness. It stains readily with all dyes and retains the Gram stain in fresh cultures. Old cultures lose the stain by Gram's method. If the Gram stain with a red counterstain is applied, filaments may be composed of blue Gram-positive and red Gram-negative members. The filaments often intertwine so as to give the appearance of a leptothrix. With methylene-blue granules can be demonstrated, which serve to differentiate this organism from many others. It grows well on mediums containing milk constituents, particularly well in sterilized milk. On beerwort growth is poor and on the usual laboratory mediums there is no growth. This accounts for the fact that the organism has been overlooked frequently. It can be cultivated in beef-broth containing dextrose and some carbonate to neutralize the acid, which is formed rapidly. Some strains produce more than 3 per cent. acid, chiefly lactic acid. Slimy consistency of milk is observed frequently, and a slow proteolytic action occasionally takes place. The best temperature for cultivation is about 45 C., although the bacillus multiplies readily up to 50 C. The Bulgarian bacillus is a facultative aerobe.

In summarizing the subject it may be stated that sour milks are probably of value as food if used with discretion. They should be taken as part of the usual diet rather than in addition. One quart of milk contains about the same nutritive value as a pound of beef. If a quart of milk is consumed daily the amount of other food should be reduced proportionately. It is a significant fact that the warmest advocates of the use of Bulgarian sour milk emphasize the necessity of regulating the diet by reduction of meat and increase of carbohydrates and vegetables. Metchnikoff has stated that premature senility can be prevented by regular diet, decrease of meat and regular consumption of Bulgarian sour milk. There is much reason in this statement, but it should not be concluded that Bulgarian milk is a panacea and that intestinal putrefaction will be reduced unless moderation in diet is practiced. In the preparation of Bulgarian sour milk previous boiling is advisable to insure the absence of pathogenic germs and to avoid abnormal fermentations. Of prime importance is the choice of a suitable ferment. The Council on Pharmacy and Chemistry of the American Medical Association has examined a number of commercial preparations and has recommended those which were found efficient.

5. THE JOURNAL A. M. A., Jan. 30, 1909, 372

CONTRIBUTION TO THE SURGERY OF BONES, JOINTS AND TENDONS

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(Continued from page 1189)

TRAUMATISM OF JOINTS

The subject of traumatism of joints can be more easily and more clearly considered by adhering to the following synopsis:

I. Contusions: Strains, bruises, overwork, occupations, etc.
  A. With effusion.
    1. Transient.
    2. Permanent.
    3. Hemophilia with hydrops genu.
    4. Autotoxic effusions.
    5. Serosanguinous fluid.
  B. With hematogenous infection.
II. Penetrations: Punctures, stabs, bullet wounds, etc.
III. Lacerations:
  A. From within, as fractures and dislocations.
  B. From without, as foreign bodies, accidents, etc.

I. Contusions

Following contusions, sprains, etc., certain changes take place in the capsule of the joint which demand surgical recognition. The effusion which follows even simple contusions may be great, produce high tension in the joint and much discomfort. It is usually transient and rapidly disappears, if the joint is placed at rest, but if the patient persists in the use of the joint, the effusion may become permanent and the condition of chronic hydrops results, which finally impairs the function of the joint, limits its motion, and while not particularly painful becomes a source of hazard and annoyance to the patient. The treatment of this condition will be considered in the management of chronic hydrops.

A still more serious type of pathologic change occurs following comparatively mild traumas of the joints — most common in the elbow, next in frequency in the shoulder, then in the ankle, knee and hip, in the order mentioned. This change is a fibrous arthritis. It is rarely associated with fracture. It presages its results by continued pain after trauma, gradually increasing in severity, limitation of motion following a contusion. If the injury is in the elbow, the patient can flex the elbow fairly well for the first five days, less in ten days, and in twenty to thirty days there is practically immobilization of the joint. In from ten to twenty weeks a bony ankylosis results without the least exostosis or thickening around the joint.

In all of my cases the patients have been free from elevations of temperature during the entire course of the ankylosis, leading me to the conclusion that the path-

ologic change in the synovial membrane is not due to the metastatic infections following the trauma, but to a hyperplasia of the fibrous tissue of the synovial membrane, resembling a keloid, with subsequent ossification of this thickened and infiltrated tissue. As an example I cite the following case:

CASE 15.—Miss E. entered the hospital in September, 1898. Six weeks previously she had fallen backward out of a hammock that was suspended 3 feet from the ground, and struck on her elbow, with the forearm flexed at a right angle. It gave her considerable pain at the time, and when examined by a physician all motion could be executed perfectly, and there was no deviation of conformation and no evidence of a fracture. The traumatic pain subsided in a few days, but in six to eight days pain on motion began to increase in severity and persisted until complete fixation resulted.

This was her condition when she came to the hospital for examination. Careful examination at the time, and a subsequent skiagram, showed that there was not the slightest change in the conformation of any of the bony structures, and that there was complete ossific bony union. The physician who treated the case was severely criticized for the result, a matter over which he did not have the slightest control.

The shoulder is less likely to a bony ankylosis, but is more subject to a fibrous fixation. I know of no means of avoiding this evil outcome or foretelling in the early days what is going to follow, but if one is on one's guard, the outcome may be estimated on the tenth or fifteenth day following the accident.

In hemophiliacs slight injuries of the joint lead to large hemorrhagic effusions into the joint cavity. The blood is very slowly absorbed, and the joint is left with a thickened capsule, some limitation of motion and a large knuckle joint. Slight traumas cause recurrence of the bloody effusion. Operations in this class of cases are very hazardous, as they are associated with profuse, if not fatal hemorrhage, followed by hemorrhagic infiltration and great inflammatory thickening.

Autotoxic effusions are more common and will be treated under the head of infections. Serosanguinous effusions, following trauma, have no special significance. They are more often associated with fracture or fissures into the joint.

A secondary bloody effusion coming on weeks after the trauma and associated with enlargement of one of the bones of the joint is an indication of a malignant disease. Hematogenous infection of the joint following trauma is a rare condition clinically, although experimentally it has been demonstrated. Trauma is not infrequently the etiologic factor in localizing tuberculosis and other infective conditions in the joint.

In tuberculosis of the joint, of hematogenous origin, localized by trauma, the symptoms do not manifest themselves before three to seven weeks after the primary injury. *There is always a period of from three to seven weeks of well-being in the joint, between the symptoms resulting from the injury and the symptoms announcing the tuberculous infection in the joint.*

Direct infection of the joint with tubercle bacilli unquestionably occurs and may cause symptoms continuous with those of the primary trauma as shown in the following cases:

Von G. Middledorf, in 1886,[1] reported a case of direct infection of the synovial membrane by a penetrating wound inflicted with a hatchet. Excision of the knee-joint six weeks later showed a typical miliary tuberculosis of the synovial membrane without involvement of the bone.

Pfeiffer reports an infection of the synovial membrane of the finger-joint following a penetrating wound received in the dissection of a tuberculous cow. The wound was not sucked and the patient had no evidence of tuberculosis previous to this.

Verneuil and Barner[2] reported tuberculosis as occurring in their assistants from wounds incurred in post-mortem work.

My associate, E. W. Lee, in 1896, had a case of tuberculosis of the knuckle of the middle finger following a trauma incurred by striking it against the teeth. The tuberculosis developed before the primary wound had healed and advanced rapidly, demanding an amputation of the finger. Krause developed an infection in guinea-pigs by the injection of cultures into the knee-joint. He does not say whether or not he traumatized the joint in making these injections.

Direct infection of joints, without trauma, is not easily produced by pus microorganisms, as shown by our experiments. We did not make experiments with cultures of the tubercle bacilli. When pus infections are localized by trauma, they manifest themselves usually with symptoms of acute septic infection, such as chills, high fever, great pain, effusions, delirium, great local sensitiveness to pressure and involuntary immobilization of the joint within sixty hours after the trauma. The surgical treatment of these cases will be considered under the heading of treatment of joint infections. The primary focus which gives rise to the metastasis producing the joint lesion can usually be located in the mouth, throat, respiratory and alimentary tracts, and not infrequently on the skin and external wounds.

II. Penetrations

The penetration of a joint is one of the most serious accidents that can occur. These wounds may be divided into three classes: those made by (1) stabs; (2) bullets, and (3) blunt instruments. When not followed by infection, and when no gross lesion of the bone occurs, the inflammatory symptoms of effusion, pain and swelling rapidly subside and the joint returns to its normal condition.

Infection is the rule following penetration of the joint in civil practice, while in military practice infection is much less frequent. The order of pathologic sequences following penetrations of the joint, with infection, is:

1. Hemorrhage with rapid effusion into the joint.
2. Great pain and sensitiveness.
3. Local swelling.
4. Constitutional manifestations of septic intoxication.

These infections must be treated on exactly the same principle as hematogenous infections of the joints. There is associated, however, the additional danger of a fracture of the bone communicating with a septic process in the joint which is a dangerous combination. The indications are:

1. To reduce the tension of the effusion in the joint by aspiration.
2. At the same time and through the same needle to render the joint contents sterile and antiseptic.
3. To relieve the intra-articular pressure of the joint that is caused by involuntary muscular contraction.
4. To keep the external openings sealed to avoid the admission of air.
5. To avoid direct drainage of the joint.

The following example illustrates the manner in which we have treated these cases in the past seven years:

1. Fortschr. d. Med., 1886, p. 249

2. Deutsch. Chir., Lieferung A.

CASE 16.—Master B., aged 11, was admitted to Mercy Hospital Aug. 29, 1906, with the following history: In the evening, a needle penetrated the knee joint just below the patella. Patient himself removed the needle and slept well all night. The next morning he was unable to stand on his right leg on account of the severe pain in the knee; it was swollen and the limb was flexed to an angle of 45 degrees. There was no sign of superficial cellular infection, but there was a swelling, large effusion, and marked tenderness about the joint, and enlarged glands in the groin. His temperature on admission, four days after the accident, was 102.4 F.; pulse 116. He was delirious that night and showed severe general intoxication.

The morning after admission the patient was taken to the operating-room and with an aspirating syringe 10 c.c. of purulent material was removed and through the same needle 10 c.c. of 2 per cent. dilution in glycerin of liquor formaldehydi was injected. Patient was put to bed with Buck's extension on the leg and hot fomentations applied to the knee. That night he was quite comfortable; slept five to seven hours.

Three days following the first aspiration and injection the knee was again aspirated, this time removing about 50 c.c. of a serosanguinous fluid containing many flocculi of pus and fibrin, and the joint was again injected with 10 c.c. of the formaldehyd solution in glycerin. This procedure was repeated after another three days.

After the first aspiration and injection the temperature immediately dropped to 99.8 F. and at no time following this was the temperature above 100.2 F. Ten days after the first aspiration and injection the temperature became normal and remained so throughout the convalescence. Four weeks after the injury the patient was allowed to get up, and massage of the knee was instituted. Patient left the hospital eight weeks after the first injection with a perfectly functionating knee-joint.

I have had similar results with this treatment following injuries caused by meat- and freight-hooks, adze wounds and nail and wire penetrations. In none of these cases, unassociated with fracture, was a drainage-tube necessary in order to overcome the infection.

It is my conviction *that penetration infections of a joint should never be treated by free or tubal drainage when unassociated with a fracture.* A joint that is opened and freely drained for infection has in 96 per cent. of the cases, as a final result, ankylosis or synechiæ of its synovial membrane. *I have stated this law, that all the serous lined surfaces will not tolerate exposure to air or contact with foreign bodies for any considerable length of time without destruction of their endothelial cells.* 'Adhesions' follow and ankylosis results. Therefore, when the operator determines to open and drain a joint, he agrees with himself that the best result he can hope to obtain is a bony or fibrous ankylosis and this is about the worst result that the patient could get (except death), even without surgical intervention, which was not very flattering to the previous plan of treatment.

III. Lacerations

Compound lacerations from without inward are much more frequently followed by infections of the joints, as the foreign body carries into and implants within the joint the infective material. In these cases the field of injury, but not the wound, should be immediately swabbed with tincture of iodin. The opening should be enlarged with the scalpel and the traumatized, lacerated and soiled zone should be dissected out carefully with the aid of the chisel, forceps and scissors. Care should be taken not to handle, rub, sponge or touch any uninjured tissue of the joint, particularly the synovial membrane. The abraded surface of bone should be covered with the thinnest possible layer of a Moorhof plug. The capsule of the joint should then be accurately sutured, covering the entire opening of the joint, if possible, otherwise a flap of fascia and fat or muscle should be transposed so as to cover it completely.

An immediate injection of 10 to 20 c.c. of 2 per cent. dilution in glycerin of liquor formaldehydi that has been mixed at least twenty-four hours before, should be made through an exploratory needle inserted from the opposite side.

This produces an immediate local immunizing response against infection:

A. By rendering the effusion not only aseptic but antiseptic—an unfavorable culture medium.

B. By producing a cellular infiltration on and in the synovial membrane, coffer-damming its lymph-spaces and protecting the tissue against bacterial invasion.

C. By producing an immediate pronounced polymorphonuclear leukocytosis (1) in the synovial membrane, and (2) constitutionally. These cells increase from 20 to 90 per cent. within forty-eight hours after the injection.

This latter I believe is the most important factor in the prevention of infections of the joint. I have demonstrated this leukocytic response by aspirating the fluid twelve, twenty-four, forty-eight and seventy-two hours after injection. The synovial infiltration has been demonstrated by experiments to be cited later. The ligaments and freshened margins of the skin should be approximated; a rubber tissue drain without gauze should extend down to but never into the joint.

If the effusion and tension in the joint are great, it should be aspirated in from twelve to twenty-four hours. If the temperature is high, it should be followed by a second aspiration and formaldehyd in glycerin injection. The joint should not be kept open or drained. It must be immobilized completely by an extension adequate to produce a separation of the articular surfaces of the joint.

To show the advantages of the immediate closure of the joint and injection treatment following lacerations, I cite the following case:

CASE 17.—Mr. R., aged 24, entered the hospital Jan. 8, 1911, with the following history: While working in an entrance way to a tunnel, a railroad engine approached him at a rapid rate and was so near he could not escape. On the spur of the moment he caught hold of the driving rod of the wheels of the engine and was dragged a considerable distance, jerked up and down with the motion of the driving rod and sustained the following injury to his right knee: A deep lacerated wound on the outer side of the knee-joint exposing the entire half of the patella, tearing the capsule and laying the joint open. On examination it was found that the entire wound and joint cavity were covered with dirt and small particles of cinders. The wound was cleansed with tincture of iodin, care being taken not to apply the solution to the exposed joint surface. There was no scrubbing of the wound but a dry sterile dressing was applied. Patient was given 1,500 units of the anti-tetanic serum and put to bed.

About twelve hours after entering the hospital the patient was taken to the operating-room where the wound was freely swabbed with tincture of iodin, care being again taken to avoid its application to the joint surface. With sterile scissors and tissue forceps all the loose fragments and muscles were removed, and the ragged edges of the skin, fascia and capsule were trimmed off. The capsule and fascia were sutured with phospho-bronze wire, and the skin was sutured with horsehair. A small strip of rubber tissue allowed the drainage of the subcutaneous structures, but did not extend into the joint.

Another application of iodin was made over the entire surface and 10 c.c. of 2 per cent. dilution in glycerin of liquor formaldehydi injected into the knee-joint with the regular injecting needle, and the punctured wound sealed with collodion. A dry dressing was applied and the patient was put to bed with a Buck's extension of 25 pounds on the leg.

The temperature on the following day ranged from 98.6 to 99 F.; on the second day from 98.2 to 99.6 F.; on the third day from 98.2 to 99.2 F.; on the fourth day the temperature was normal and remained so until the patient left the hospital. The small tissue drain was taken out on the third day and the stitches were removed on the fifteenth day, with primary union of the skin. It was found unnecessary to aspirate or inject the joint subsequent to the first injection at the time of the operation.

The extension was taken off at the end of four weeks and the patient was allowed to be up and about. Five weeks after the injury the patient left the hospital with a perfectly functionating knee-joint.

Contrast this result with the following case, which shows the evil effects of drainage. In the bullet wound cases and after disinfecting and freshening of the external portion of the tract, and the removal of the foreign body, if indicated, the closure of the joint should at once be effected, and the joint filled with the formaldehyd in glycerin immunizing solution. The same rules for subsequent action should be observed regarding the temperature and synovial tension as in the other joint infections or exposures.

CASE 18.—In 1886, Officer B., of the Pinkerton Detective Force, was shot through the right knee-joint with a 38 caliber Smith & Wesson revolver. The internal tuberosity of the tibia was fractured. The track of the bullet was freshened with tissue forceps and scissors without washing, the wound enlarged down to and including the synovial membrane, and the capsule and canal accurately sutured. The skin orifice was also closed and a Buck's extension of 15 pounds applied to the leg. The temperature reached 104 F. on the following day. The joint was aspirated without injection and the temperature dropped two degrees. The second day the temperature rose to 103.2 F. Following aspiration it dropped to 101.5 F. The fourth day it reached 102 F.; following aspiration it dropped to 99.6 F. At no time subsequently did it exceed 101 F. Convalescence was complete without further aspiration and the functional result in the joint was perfect.

In the same period in my Cook County Hospital service, we had numerous bullet wounds of joints treated by drainage, flushing, disinfectants, etc., and in the great majority of cases the patients were intensely ill, the process of repair and convalescence was slow, the functional results in the enormous majority of cases was imperfect, and in several ankylosis resulted. We had not then learned the evil significance of surface trauma to serous membranes, nor did we avoid sponging, rubbing, handling, flushing or unnecessary drainage. Neither did we fully appreciate the significance of the avoidance of intra-articular pressure from involuntary muscular contractions in acute infections.

Compound lacerations of joints may take place from within outward by fracture, luxation, over-extension or flexion. When these occur, if the fragments of bone are driven out through the boot or clothing, they may become seriously infected and death may follow such infection in a very short time.

In 1879, during my internship in the Cook County Hospital, a patient was admitted with a compound posterior dislocation of both knee-joints. The internal condyle had been driven out through the skin behind. The openings were only buttonhole in size and there was no fracture. This occurred in the pre-antiseptic period. The following day the patient had a chill, followed by a temperature of 104 F., great swelling of the joints and a seropurulent discharge from the opening. The high temperature continued and the patient died from acute sepsis seventy-six hours after the injury.

So serious were the compound dislocations and fractures at that time that Billroth, in his masterly work on "Surgical Pathology and Treatment," edition of 1876, advised immediate amputation in all of these acute cases. Contrast that line of treatment and its result with the present management and the favorable sequences. It must be borne in mind, however, that the same virulent microorganisms exist as formerly; that the same opportunity for infection exists, and that the bones and joints have the same susceptibility to infection, and that there is now no greater constitutional or local resistance, and we must conclude that the favorable results are due to the present line of treatment. That carries with it the significance of the immediate and exact exercise of each and every step in the treatment of these cases. They are vital to the outcome, and the overwhelming force of numbers of good results make their fulfilment in each case obligatory on the profession.

In the management of this class of cases the essential points are:

1. The field should be rendered sterile without washing the area with solutions or disinfectants of any kind. All of the disinfectants used in the neighborhood of any wound tend to infect it. Tincture of iodin renders it sterile without danger of infection.

2. The protruding bone should be cleansed with tissue forceps, scissors and chisel, not with solutions. Care should be taken not to touch any portion of bone or joint with sponge, fingers or foreign bodies.

3. The reduction should be made with the least possible trauma.

4. The opening into the joint should be closed with accurate sutures of the capsule, ligaments and skin, preferably with wire sutures, and without drain; the joint should be injected with 10 to 20 c.c. of formaldehyd-in-glycerin solution and completely immobilized, with extension in the case of the hip, knee, elbow and shoulder injuries. For two or three days following, there will probably be some elevation of temperature, but unless it is very high and the pain in the joint great, the dressings should be undisturbed.

When the temperature is high and the effusion great, aspiration of the joint through the needle should be resorted to and the formaldehyd injection repeated. The aspiration may be repeated in from twelve to twenty-four hours if the pain is severe, but the injections should not be repeated before twenty-four or forty-eight hours unless the temperature continues high. By repeated aspirations and occasional injections the case can be conducted to an aseptic process of repair.

If the sutures give way and the joint will not hold the solution of formaldehyd in glycerin, the effect of the treatment is greatly diminished, and the case should be treated as a compound open infection of the joint. In extensive fractures, associated with compound injuries of the joint, it must be borne in mind that the freshened bony surfaces are much more susceptible to infections with serious constitutional results than the synovial membrane, and, further, that the fractured bony surface has no such non-absorbing fibrous capsule beneath it as the synovial membrane possesses; in other words, that the danger to the life of the patient is greater than from

infections of the joint, and may demand early drainage when symptoms appear. The individual injury equation and the experience of the surgeon must guide him in the decision when and where drainage should be instituted.

The limb should be placed primarily in the best position for subsequent usefulness should ankylosis result. The anatomic conformation of the limb after these injuries is entirely within the control of the surgeon, if he gives it adequate attention in the initial days of the infection. These compound fractures should never have a foreign body support inserted at the time of injury, such as wire, plate or nails, as such a procedure greatly increases the danger of infection.

In the management of all these cases the simplest conduct meeting the positive indications produces the best results and may be summarized as follows:

1. Disinfection of the outer surface of the wound area with tincture of iodin.
2. The enlargement of the wound and mechanical disinfection down to the synovial membrane, with the removal of all the traumatized and lacerated structures.
3. Accurate suture of the synovial membrane and overlying structures, with possible capillary drainage of the latter.
4. Immediate closure of all openings in the joint. If tissue has been torn away a flap should be used to cover the exposed joint.
5. Immediate and complete immobilization of the joint.
6. All chemical disinfecting solutions and isotonic salt solutions should be avoided in this work.
7. Early extension to prevent articular contact for days or weeks after the injury.
8. Passive motion should be undertaken early and frequently, and should be painless.

FRACTURES INTO OR CLOSE TO THE JOINTS (NOT COMPOUND)

The changes that take place in fractures near the joint are:

1. Hemorrhage.
2. Effusion into the joint, with the development of infiltration and thickening of its synovial membrane; the coffer-damming of the lymphatic and intercellular spaces with lymphocytes.
3. Absorption of fluid contents and infiltrating products in the substance of the synovial membrane.
4. The formation of exostoses from the periosteum and bone ends.
5. Ossification of the periosteum and the periarticular fibrous capsule combined. The latter occurs only in spirochetic or tabetic cases.

The local immunity effect of trauma against infection is produced by the elements mentioned above. Advantage may be taken of this local tissue immunity in all operative procedures on joints following injuries. It reaches its maximum between the eighth and twelfth days. We first recognized its surgical import in fractures of the patella.

In the fifteen years, between 1880 and 1895, operations for fractures of the patella were done *immediately* after the injury under antiseptic (after Lister) and later under aseptic precautions, with a too common resultant infection of the joint. Then it was gradually learned by observation that joints operated on late, on the tenth to the fifteenth day, were much less likely to become infected, or have large effusions following the wiring of the patella, than those operated on early.

The explanation for this immunity lies in the changes or inflammatory reaction induced by the trauma and blood in the joint, as observed macroscopically and demonstrated microscopically in fragments of synovial membrane removed under these circumstances. This led me seven years ago to the adoption of the prophylactic or chemical irritation of the joint immediately after the injury preparatory to surgical intervention. In the knee and hip I injected 5 to 15 c.c. of the formaldehyd-in-glycerin solution immediately after the injury, and operated seven to ten days following the injection. Since the adoption of this plan I have not seen a case of joint infection following the repair of fracture of the patella or any other type of fracture not previously compound or involving the joint. With this procedure there is not even a perceptible hydrops following the operation. In late operation for fracture of patella I always use the local immunizing injection.

ARTHRITIS—INFLAMMATION OF THE JOINTS

The factors of destruction of tissue in infections of the joints are similar to those causing destruction in other tissue infections, with the exception of the variations in vascularity in the synovial membrane and the comparative absence of vascularity in the fibrous capsule. They may be enumerated as follows:

1. Virulence of the microorganisms producing the infection.
2. The minus resistance of the patient.
3. Retention of infection products—pus under pressure, causing ischemia of the synovial surface thus favoring the biotic and toxic necrotizing effects of the microorganisms.
4. The intra-articular pressure of the inflamed joint surfaces by the involuntary muscular contractions in its effort to immobilize the inflamed and painful joint.

The rôle played by each of these elements may vary in different joints and under different circumstances, but they essentially control all the destructions resulting from infections, whether (a) these occur as a result of lacerations and penetrations and direct infection admitted into the joint from without—traumatic infections, or whether (b) they are carried through the blood and lymph streams into the joint—hematogenous and lymphatic infections.

There are only two tissues in and at the joint that are the seats of primary infection, whether traumatic or hematogenous, and these are the synovial membrane and the bone. The cartilage and fibrous capsule are never the seats of primary infection.

In the traumatic cases, penetrations, punctures, etc., the infection is of the subendothelial layer after the endothelial cells have been destroyed by trauma or erosion. The hematogenous infections of the joint *never take place on the synovial surface*, but in the capillary and lymph layers of the synovial membrane, always beneath the endothelial layer.

In infection of the joint, either synovial or osseous, effusion takes place into the joint from the periarticular infarcts, long before microorganisms appear on the synovial surface or in the fluid, as in the following:

1. In tuberculosis of a bone in the neighborhood of a joint, effusion is present weeks or even months before the tubercle, bacilli appear in the fluid of the joint cavity.
2. In metastatic osteomyelitis near a joint, effusion occurs and remains for weeks and months without the microorganisms ever appearing in the joint.

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Fig. 81.—Charcot hip with fracture of neck of femur and a large mass of bone near anterior superior spine of ilium, representing ossification of capsule.

Fig. 82.—The large mass over the left hip is very evident.

Fig. 83.—Charcot ankle with great lateral displacement outward.

Fig. 86.—Showing range of voluntary abduction in same case and ability to bear weight on hip. Same case as Fig. 84.

Fig. 87.—Voluntary forward motion in hip. A considerable degree of rotary motion was also present. Same case as Fig. 84.

Fig. 84.—Complete bony ankylosis of hips of eleven years' duration, result of metastatic gonorrheal arthritis.

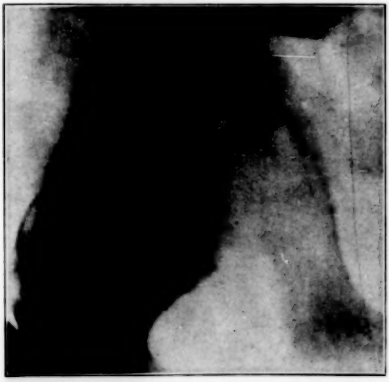

Fig. 85.—Left hip shortly after operation. Fascia lata flap interposed; anatomic conformation of joint restored. Nail is driven through great trochanter, which was removed during the operation.

Fig. 88.—In semisitting position for first time in eleven years.

Fig. 89.—Bony ankylosis between tibia and femur and patella and femur of eighteen months' duration, with considerable flexion of knee.

Fig. 90.—Same, one month after operation.

Fig. 92.—Bony ankylosis of right hip, of four years' duration, result of pelvic infection.

Fig. 93.—After the arthroplasty, two nails being used to replace the trochanter. In this case a hematoma developed. The patient made a splendid recovery.

Fig. 91.—Voluntary flexion fourteen months after operation.

Figure 96.

Figs. 96 and 97.—Removal of patella; perfect flexion and extension.

Fig. 98.—Bony ankylosis of tibia and femur with fusion of patella and femur and considerable flexion at knee and displacement of lower leg outward.

Fig. 99.—Same knee about six weeks after operation; anatomic restoration of joint.

Figs. 94 and 95.—Four months after operation there was great latitude of voluntary motion.

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Fig. 101.—Tuberculosis of the patella with pathologic fracture. No involvement of joint. The patella with its bursa was removed.

Fig. 100.—Position of leg in this case (Figure 99) before operation.

Fig. 102.—Same case. Perfect symmetry of legs; no deformity; no loss of function.

Fig. 104.—Full weight of body placed on left leg after removal of semilunar cartilage.

Fig. 105.—Perfect flexion.

Fig. 103.—McCauley adjustable apparatus for instituting early passive motion after arthroplasty on the knee-joint. The height of the stand is adjustable. The leg is laid on the wooden roller and a weight is attached to the foot or the leg can be bent at the knee otherwise.

Fig. 106.—Symmetry of both knees in same case; no deformity. (In this connection, see Figures 107 and 108 on page 1263.)

Fig. 109.—Bony ankylosis of right knee with flexion of ten months' duration, the result of an infection of a finger.

Fig. 110.—Position of leg in this case.

Fig. 111.—Both knees from behind. On the right, the knee operated on. The anatomic conformation of this knee is perfect, as comparison with the normal knee shows. The knee operated on can be distinguished by the fact that because of the chiseling done on the upper extremity of the tibia the head of the fibula has been brought nearer the articular surface.

Figure 112.

Figs. 112 and 113.—Perfect extension and flexion eight weeks after operation.

Figure 116.

Figs. 116 and 117.—Full extension and flexion of arm with perfect pronation and supination eighteen months after operation. No return of ankylosis.

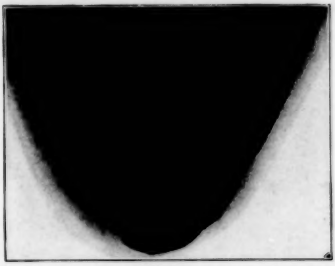

Fig. 115.—Eighteen months after operation; full flexion of arm with an anatomically as well as functionally normal joint.

Fig. 114.—Bony ankylosis of ulna and humerus and radius and humerus of two and a half years' duration following intranasal operation. Arm flexed at acute angle.

Figure 119.

Figs. 119 and 120.—Flexion and extension of wrist shortly after operation.

Fig. 118.—Bony ankylosis between radius and scaphoid of one year's duration. One-third inch of articular end of radius was removed and flap interposed.

Fig. 121.—Diagram of shoulder arthroplasty. A. Triangular sector or flap capsule to be sutured into surgical neck of humerus for the purpose of helping to retain the head of the bone in the glenoid cavity. B. Long head of biceps, cut. C. Head of humerus. D. Capsule, split open and slipped into glenoid cavity under head of bone to serve as interposing flap.

Fig. 122.—Operation completed. A. Capsule flap. B. Long head of biceps. C. Head of humerus. Ready to close wound; the deltoid muscle will be sutured over the exposed parts and also aid in maintaining retention of head of bone in glenoid cavity.

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3. Periarticular infections of the pneumococcic type in children are accompanied by great articular effusion, but no pneumococci are present in the fluid.

4. In practically all metastatic infections of the joint the subendothelial layer is primarily involved and holds the microorganisms for hours or days before they gain entrance to the fluid in the joint cavity. Streptococcic infection is an exception to this rule, as the cocci run freely through the lymph spaces and enter the fluid of the joint early.

5. Cultures and smears made from fluid aspirated from inflamed joints give negative results in the early stage, notwithstanding the great quantity of fluid present.

MULTIPLE ARTHRITIS

CASE 19.—*Patient.*—Mr. W., aged 32, was admitted to hospital April 23, 1906. Family history was negative. He had had the ordinary diseases of childhood, and four attacks of specific urethritis between 1891 and 1897. There were no local complications. He had lues in 1895. He was treated regularly for four years, and had no recurrence of symptoms.

Present Trouble.—In 1897, while carrying a horse, patient accidentally stubbed the index-finger of left hand. This caused considerable pain in the metacarpophalangeal articulation. It was somewhat swollen and tender. This occurred just about the time patient was recovering from last attack of specific urethritis. There was not a great deal of pain in the joint but it continued to feel sore and slightly enlarged. There were no further symptoms until 1902, at which time patient began to feel a slight pain and soreness in left knee. At first he felt soreness only when getting in or out of his buggy. In about a month it began to pain him quite severely, but he did not go to bed. Almost immediately after or simultaneous with the acute onset of pain, the knee became stiff and swollen. The swelling was so great that the patella could not be seen. There was no redness of the skin but tenderness was excessive. There was no constitutional disturbance except loss of weight. The stiffness in the limb would leave after walking a few blocks, but would come back after a few minutes rest. Within two weeks after the onset of acute symptoms in the left knee, the right knee became involved similarly. Seven or eight months afterward both elbows became involved similarly, but the swelling was not so marked. Shortly afterward both shoulders were affected and in the course of about a year both ankles were similarly affected; then the temporomaxillary joints, and there was some tenderness in the seventh cervical vertebra and the dorsal down to the second lumbar. For the first four or five months after the involvement of the joints, the pain would be intense, most severe about 3 a. m. During the past year the symptoms have been practically stationary with the exception of an occasional pain in the ankles. There was none in the other joints except on motion. Until the last year the patient lost 45 pounds in weight.

Examination.—This revealed, first, an almost continuous pain of subacute character in knees, ankles and elbows; second, stiffness and limitation of motion in the joints mentioned; third, very severe pain and sensitiveness on motion; fourth, some swelling and marked tenderness.

Treatment.—The left knee, ankle and elbow were injected with iodoform, formaldehyd and glycerin solution. This caused excruciating pain for about two or three days. Hot fomentations were applied. Buck's extension was applied on the limb for about three weeks. After about three days the right knee, angle and elbow were injected. Hot fomentations and extensions were applied.

Results.—At the end of seven days after the joints were injected, they were free from pain and soreness; tenderness on pressure practically gone, stiffness disappearing, range of motion gradually increasing. By May 1 there was no stiffness, no tenderness, no pain of any kind in the joints. Range of motion in all the joints was improved as follows:

Left elbow before injection	31 degrees
Left elbow after injection	50 degrees
Right elbow before injection	31 degrees
Right elbow after injection	50 degrees
Left knee before injection	6 degrees
Left knee after injection	29 degrees
Right knee before injection	6½ degrees
Right knee after injection	31 degrees

Notwithstanding the age of the patient and the prolonged period of swelling and infiltration, one of the striking features was the early relief of pain after the injection. At that time we were using liquor formaldehydi with the iodoform and glycerin. Iodoform is not so good a stimulant to the production of polynuclear leukocytes as is liquor formaldehydi. It is a greater stimulant to the production of fibrous connective tissue. For that reason the iodoform was dropped from the solution when used in the arthritides other than those of tuberculous origin.

Fig. 107.—Utilizing a flap from the quadriceps tendon to strengthen a fractured patella or a joint after removal of the patella. A flap about one inch wide and six inches long is excised from the quadriceps tendon.

Fig. 108.—This flap is turned down over the patella and is inserted into a slit in the ligamentum patellæ, the end of the flap having been slit so that each half is slipped around the ligament, passing from behind forward. The halves meet in front of the ligament and are sutured with catgut.

Aspiration of fluid in known Neisserian arthritides gives negative finding in from 20 to 93 per cent. of the cases, depending on the period of time that has elapsed between the appearance of the synovitis and the date of aspiration. This retention of the metastatic organism in the subendothelial layer accounts for the early negative bacterial findings in so many joint inflammations. In many of the arthritides, we are with our present knowledge unable to locate the primary atrium of infection. They are termed cryptogenetic arthritides. In the majority of these cases the primary infection can be demonstrated clearly and unmistakably in some distant portion of the body.

The veterinary surgeons are also aware of the connection between peripheral infection and arthritides. This is clearly shown in Circular No. 13, April, 1910, Agricultural Experimental Station, University of Wisconsin,

where navel infections are clearly demonstrated to be the etiologic factors in the production of equine arthritides in new-born foals in the fetlock, stifle, hip, knee, elbow and shoulder. Many of these processes go on to abscess formation and ankylosis, and a large number terminate in early death from general sepsis, diarrhea, anorexia, emaciation, hematuria, etc.

It is my conviction that every type of non-traumatic joint inflammation is a metastatic manifestation of a primary infection in some other portion of the body. It is my further conviction that there is no idiopathic rheumatic arthritis, any more than there is an idiopathic peritonitis.

METASTATIC ARTHRITIS

CASE 20.—*Patient.*—Miss H. P., aged 30, was admitted to Mercy Hospital Jan. 18, 1911. She had two sisters, with whom she lived for 14 years, who died of tuberculosis. The patient herself had the diseases of childhood. At the age of 21 she had an ulcerated tooth with a chronic alveolar sinus discharging all the time until her joint conditions were manifested. She did not have it attended to for one year, at which time she had it filled. Since then she has had no trouble with it. She always has had a slight leukorrhea.

Present Trouble.—Began ten years ago, three years following her ulcerated tooth, with pain in the right wrist and shoulder. Pain was increased on motion, and within two or three days the wrist and shoulder became inflamed and tender. This attack lasted a month, following which joints were stiff but she had some movement. About a month afterward, she had another attack in the left shoulder, then involving the hips, knees and feet. These attacks all occurred within two years, the last attack being eight years ago and involved all the joints together. After this attack subsided, the knees were flexed at an acute angle, but could be moved some. Also all the fingers, both wrists and shoulders were stiffened. Since this time the stiffness in all the joints has improved a little, except in the right wrist which is entirely stiff. Joints involved were both knees and ankles partial; all the toes, both hips, both wrists; fingers partial; both shoulders.

This was a typical illustration of the chronic type of metastatic arthritis that occurs as the result of alveolar suppuration or pyorrhea.

Treatment.—The joints were injected with 2 per cent. dilution of liquor formaldehydi in glycerin solution, but she was benefited only slightly by the treatment, as the superlative degree changes had taken place in the joints at that time. However, she was relieved of her pain. The motility of the joints was not increased materially.

One of the reasons why the profession has been so tardy in recognizing the connection between the primary infections, as of the nose, pharynx, tonsils, skin, gallbladder, typhoid ulcer or urethra, and the secondary arthritides, is that a long period of time elapses between the primary infection and the secondary arthritides in a large percentage of the cases. In my analysis of hundreds of these cases I find that the Neisserian arthritis does not occur until eighteen to twenty-two days after the primary ocular, urethral or vaginal infections, or a secondary exacerbation of the same. The influenzal infection of joints occurs between the tenth and the fourteenth days after the manifestation of the primary infection. Furuncular infections, usually of the staphylococcus type, show their metastases in the joints in the ninth to the eleventh days. Infections of the hand or foot of the mixed varieties, not streptococcic, usually show the joint metastasis about the tenth day, while the streptococcic infections can cause metastatic arthritides within forty-eight to seventy-two hours, as shown in the following case in the practice of my former colleague, Dr. J. M. Neff, now of Spokane:

While lighting his cigar, a patient had a sliver from the match run into his finger on the right hand. This occurred in the morning, about 8:30. That evening he felt ill, and on the following morning he had a chill, with a phlegmon appearing in the subpectoralis fascia of the axilla. The second morning he had another chill and his left knee joint began to swell. Cultures from his blood, from the subpectoral seropurulent fluid and from his knee-joint all showed streptococci and colon bacilli in 60 hours. There was only a local inauration without suppuration in the finger. The reddened lymph-channels on the forearm and upper arm were easily recognized. Later a number of other joints became involved. All were opened without drainage by the surgeon in charge, and the man recovered fully without ankylosis. This case shows the speed of metastasis in streptococcic infections even when associated with the colon bacilli.

The scarlatinal arthritis infections usually occur from the eleventh to the sixteenth day after the onset of symptoms. These are usually of streptococcic origin and make their appearance about the time the original symptoms disappear. This period corresponds with many of the original infections of unidentified infective flora.

In contrast with these we have the very late manifestation of the arthritic and osseous infections occurring in typhoid. These come on from the fourth to the eighth week, or about the time that the ulcers are healing or healed. The pneumonic joint metastases occur in about the middle of the time element, that is, from ten to sixteen days after onset, i.e., in period of pulmonary lysis. With the exception of the streptococcic group, the arthritides do not occur in the early stage of the primary infection, but always in the lytic or convalescent stage, or after the primary lesion has apparently healed.

Many of the joint localizations of the constitutional infection are associated with or are the results of (1) trauma (most common of all), and (2) exposure, as wetting of the feet, playing in the snow, chilling of the general surface of the body, exposure and chilling in swimming, over or long-continued exertions and other factors so commonly recognized as focalizers of constitutional infections.

The term "rheumatism" should be expunged from medical nomenclatures and a name given to indicate in itself, at least, some of the pathologic or etiologic elements in the joint. I prefer the term "metastatic arthritis."

In the traumatic infections, class A, the infective microorganisms are admitted to the surface of the synovial membrane by direct penetration. They do or do not produce a local infection early, dependent on whether the endothelial cells are disturbed by the trauma or whether the infective material is held by the synovial membrane sufficiently long to erode the endothelial cells, which are shingles of protection and must be disturbed to admit the microorganisms into the subendothelial lymphatic and capillary zones, as was shown by the experiments conducted for me by Dr. Victor L. Schrager and Dr. Kellogg Speed.

In traumatic infections unassociated with fractures, the first indication in the lacerated ones is to close the joint capsules as accurately as possible without drainage. The subcutaneous cellular tissue down to the joint may be drained with a gutta-percha tissue. The joint, depending on its size, should immediately be injected with 10 to 20 c.c. of liquor formaldehydi in glycerin. A Buck's extension should be applied, and the joint should be aspirated and reinjected in twenty-four hours, if the tension is great, or if the temperature is ascending, even without tension on the capsule. The injection or aspiration should be repeated in two, three or four days,

depending on the constitutional manifestations of the presence or absence of infection.

Usually three or four injections suffice to sterilize the joint completely. In puncture wounds exactly the same details are followed, except that the aspiration, on account of recurrent tension in the joint, may need to be repeated more frequently, but the injection should not be more frequent.

The treatment should be instituted immediately after the injury if the best results are to be obtained. *No fluid and no treatment will restore joint structures that have already been destroyed by infection. Time is, therefore, an element of great importance.*

Hematogenous acute arthritides (acute rheumatism), from a surgical standpoint, and they are all primarily surgical, may be divided into (a) monarticular, biarticular and triarticular types, with readily demonstrable primary foci of infection; (b) the polyarticular type, often of cryptogenetic origin. The first is usually initiated with a chill, followed by diffuse arthritic and muscular pains, and in twelve, twenty-four or thirty-six hours there is severe pain and swelling in one or a few joints.

It is a clinical fact that this type often leads to a bony ankylosis of the joints involved, and the initial chill must be accepted as a warning that such a result is likely to follow. The microorganisms here are of the virulent pyogenic type, which destroy the synovial membrane and the cartilage, and finally lead to ankylosis —unless scientifically managed, from a surgical standpoint.

It is also a clinical fact that the polyarticular variety is rarely initiated with a chill, attacks many joints simultaneously and rarely leads to bony ankylosis. It is the result of the milder types of microbic infection, *Diplococcus rheumaticus*, etc., and subsides in the course of six to eight weeks, leaving the joint in apparently as good condition as before. This result, however, is not uniform. Occasionally in the polyarticular variety, initiated with a chill, we have ankylosis of many of the larger joints, as the hip, knee, ankle, etc., and less frequently some of the small joints. Both of these varieties are, we believe, cryptogenetic infections, and in the great majority of cases we have been able to demonstrate the primary atrium of infection.

The *synovitis resulting* from these infections in joints may be classified as follows: (a) simple, serous transudative; (b) fibroid, infiltrating, cicatrizing, contracting; (c) serous, necrotizing, malignant, ankylosing; (d) rheumatoid, absorbing, infiltrating, hyperplastic, periarticular, ossifying; (e) suppurative; (f) tuberculous, luetic, etc.

MULTIPLE ARTHRITIS; RESULT OF TUBERCULOUS CAVITY IN LUNG

CASE 21.—*Patient.*—Mr. B., aged 35, electrician, was admitted to Mercy Hospital Sept. 7, 1911. Family history was negative. He had had typhoid at the age of 30 and made a good recovery. He denied venereal infection, but on examination of the urine *Tripper-Faden* were found.

Present Trouble.—August, 1902, the patient suffered from what the physicians called typhoid (?). He lost 15 pounds in weight during the 14 weeks he was ill. He resumed his work but never regained his former strength and weight. During the three years following he suffered almost continually from pain in the chest, which the physicians called pleurisy, and began to have a productive cough which has persisted up to the present time. Repeated examinations of the sputum showed the presence of tubercle bacilli. In 1905, the patient was taken to a farm. He had severe night sweats and an afternoon temperature of 101 F. with continuous cough. In one year he had improved sufficiently to allow him to resume his former work. He worked until March, 1909, when the severe cough and afternoon temperature began. One day he noticed some tenderness in the right wrist following severe exercise. This was continuous for about one month, when it became very excruciating but without rise of temperature or chills. About the same time the patient noticed a soreness in the right ankle with swelling and tenderness. Several weeks later the left elbow became sore and swollen. In April, the right knee began to swell and there was marked tenderness on motion for several weeks. About this time the patient was taken with a severe attack of laryngitis with a temperature of 103 F. and was confined to his bed for three weeks, during which time his right knee became swollen and painful.

Examination.—The range of motion in the right knee was limited to about 4 degrees and in the left knee to about 8 degrees. He could not flex his elbow at all and both wrists were fixed.

Treatment.—Sept. 8, 1911, both knees were injected with 15 to 20 c.c. of a 2 per cent. dilution of liquor formaldehydi in glycerin, and Buck's extension with 15-pound weight was applied to each leg. He was also given tuberculin regularly for his lung trouble. September 11 and 23 the knees were again injected. November 18 both knees, left elbow (10 c.c.) and left wrist (7 c.c.) were injected.

Result.—Before injection the range of motion in the right knee was about 4 degrees and very painful. After injection the range of motion in the right knee was about 80 degrees with scarcely any pain. Before injection the range of motion in the left knee was about 8 degrees and after injection (two months after the first injection) limb could be brought to a right angle without the least pain. On leaving the hospital Jan. 1, 1912, patient was up and about and walked without pain with the aid of a crutch and a cane.

In addition to these, we have extensions into the joint from local bone diseases, as tuberculous osteitis and osteomyelitis—the former frequent and the most common cause of tuberculosis of the joint, the latter rare.

Infections of the joint from periarticular, communicating or contiguous phlegmons are uncommon. In one of my cases there was an infection of the subdeltoid bursa which subsequently involved the joint.

The suppurative and simple serous arthritides are the manifestations of the acute varieties of infections, as acute pharyngitis, paranasal sinus infections, paratonsillitis, acute gastro-intestinal disorders, influenza, acute genito-urinary disorders, etc. The necrotizing, malignant and ankylosing complications are the superlative degree of either of the preceding conditions in their advanced stages.

The fibroid, infiltrating, cicatrizing and contracting variety are from the lower types of infection of the large intestine, gall-bladder, etc., and usually by the organisms of the colon group. The rheumatoid joints are most commonly metastatic from *chronic* infection of the alveolar processes, posterior nares, paranasal sinuses, tonsils, pharynx, genitalia and sigmoid.

We had at one time in Mercy Hospital four cases of rheumatoid arthritis, so-called, with sinuses or ulcers in the alveolar processes, each bearing practically the same causal relation to the metastatic arthritic condition.

In this work I do not include the tumors of the synovial membrane, as the lipomata, arborescent tuberculosis or hypertrophic synovial villi; nor do I intend to treat of the tuberculous infection of joints, acute or chronic, except primary synovial without bone involvement, which is rare, except in children.

(To be continued)

THE INHERITANCE OF THE NEUROPATHIC CONSTITUTION *

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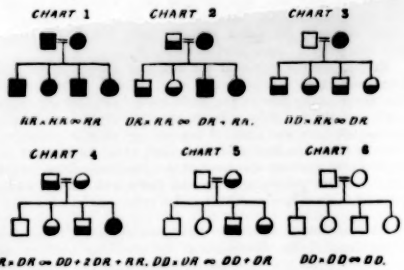
I. MENDEL'S THEORY AND NEUROPATHIC HEREDITY

The application of Mendel's theory in recent studies of heredity in feeble-mindedness,[1] epilepsy,[2] insanity,[3] and other neuropathic conditions,[4] has furnished results which seem to justify the assumption that the full development and normal function of the mental faculties are dependent on the presence of a special determiner in the germ-plasm.

An individual may inherit this determiner from both parents, or from only one, or he may fail to inherit it from either parent. In the first case we would have an instance of duplex inheritance, in the second, one of simplex inheritance, and in the last, one of nulliplex inheritance.



Charts 1 to 6.—Various theoretically possible matings and their offspring. A square is used to represent a male and a circle a female; a plain square or circle represents a normal person; solid black, a neuropathic person; half black, a normal person of simplex inheritance. The letter D indicates a dominant trait and the letter R a recessive trait. In the present connection a normal subject of duplex inheritance is accordingly represented by the symbol DD, one of simplex inheritance by DR, and a neuropathic subject, that is to say, one of nulliplex inheritance, by RR.

Chart 1.—Both parents neuropathic, all children neuropathic.

Chart 2.—One parent normal, but with neuropathic taint from one grandparent, and other parent neuropathic, half the children will be normal but capable of transmitting the neuropathic constitution to their progeny, and half will be neuropathic.

Chart 3.—One parent normal and of pure normal ancestry and the other neuropathic, all children will be normal but capable of transmitting the neuropathic constitution to their progeny.

Chart 4.—Both parents normal but each with the neuropathic taint from one grandparent, one-fourth of the children will be normal and not capable of transmitting the neuropathic constitution, one-half will be normal but capable of transmitting the neuropathic constitution, and the remaining one-fourth will be neuropathic.

Chart 5.—Both parents being normal, one of pure normal ancestry and the other with the neuropathic taint from one grandparent, all the children will be normal; half of them will not be capable and half will be capable of transmitting the neuropathic constitution to their progeny.

Chart 6.—Both parents being normal and of pure normal ancestry, all the children will be normal and not capable of transmitting the neuropathic constitution to their progeny.

In cases of duplex inheritance — cases, that is to say, in which the individual inherits the determiner for complete mental development from both parents — we find no abnormal mental traits, but, on the contrary, a most striking stability and a resistance to the severest strains imposed by environment.

In cases of simplex inheritance — cases, that is to say, in which the individual inherits the determiner for complete mental development from only one parent — there is, as a rule, curiously enough, a similar mental stability; the normal mental disposition overshadows or conceals the neuropathic taint. In Mendelian terminology we would say that the normal disposition is a dominant trait and the neuropathic disposition a recessive one. Individuals of simplex inheritance differ from those of duplex inheritance merely by the power which they have of transmitting under certain conditions the neuropathic constitution to their offspring.

In cases of nulliplex inheritance—cases, that is to say, in which the individual fails to inherit the determiner for complete mental development from either parent — we find arrests of development, epilepsy, insanity or mental instability.

From these general principles it is possible to predict the proportions of the various types of offspring that would result from any combination of mates. Charts 1 to 6 have been prepared to illustrate the various theoretically possible matings and their offspring.

As these charts and formulas show, expectation in accordance with the Mendelian theory is to be stated as follows:

1. Both parents being neuropathic, all children will be neuropathic.

2. One parent being normal, but with the neuropathic taint from one grandparent, and the other parent being neuropathic, half the children will be normal, but capable of transmitting the neuropathic constitution to their progeny, and half will be neuropathic.

3. One parent being normal and of pure normal ancestry and the other parent being neuropathic, all the children will be normal, but capable of transmitting the neuropathic constitution to their progeny.

4. Both parents being normal, but each with the neuropathic taint from one grandparent, one-fourth of the children will be normal and not capable of transmitting the neuropathic constitution to their progeny, one-half will be normal but capable of transmitting the neuropathic constitution, and the remaining one-fourth will be neuropathic.

5. Both parents being normal, one of pure normal ancestry and the other with the neuropathic taint from one grandparent, all the children will be normal; half of them will not be capable and half will be capable of transmitting the neuropathic constitution to their progeny.

6. Both parents being normal and of pure normal ancestry, all the children will be normal and not capable of transmitting the neuropathic constitution to their progeny.

Let us now turn to observed facts. Table 1, which has been copied from a recently published study of heredity in insanity,[3] shows the closeness of correspondence between actual findings and theoretical expectation according to the Mendelian theory.

The question might arise, what degree of correspondence may be properly assumed to be requisite. Here it should be borne in mind that the proportions of theoretical expectation are but an expression of probability of chance analogous to the expectation that in flipping a penny the head and tail will be turned up, respectively, half the number of times. In other words, according to

* Read at a Quarterly Conference of State Hospital Superintendents with the State Commission in Lunacy, held at the Middletown State Hospital, Middletown, N. Y., Feb. 15, 1912.

1. Goddard, H. H.: Heredity of Feeble-Mindedness, Bull. No. 1, Eugenics Record Office, Cold Spring Harbor, N. Y., 1911.

2. Davenport, C. B., and Weeks, D. F.: A First Study of Inheritance of Epilepsy, Jour. Nerv. and Ment. Dis., 1911, xxxviii, 641.

3. Rosanoff, A. J., and Orr, F. L.: A Study of Heredity in Insanity in the Light of the Mendelian Theory, Am. Jour. Insan., October, 1911.

4. Davenport, C. B.: Heredity in Relation to Eugenics, Henry Holt & Co., New York, 1911

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the theory of probability, actual findings will approach theoretical expectation only in proportion as infinity is approached.

As far as our data are concerned, other points must further be considered. Some subjects who are theoretically expected to be neuropathic figure in the statistics as normal owing to their not having reached the age of incidence of the psychosis. In other subjects neuropathic traits may have been overlooked by the untrained informants, and it is also possible, on the other hand, that temperamental traits which are not related to the neuropathic constitution have been erroneously interpreted and counted as neuropathic.

On the whole, taking into consideration the limited amount of material, as well as the various sources of possible error, the correspondence between actual findings and theoretical expectation, as shown in Table 1, must be regarded as strikingly close.

II. THE NEUROPATHIC AS A CLASS

The expression, "neuropathic constitution," is used in this paper to designate a vast class of nervous and mental conditions. In this class we are able to distinguish more or less clearly a number of groups which we have been

TABLE 1.—CLOSENESS OF CORRESPONDENCE BETWEEN ACTUAL FINDINGS AND THEORETICAL EXPECTATION ACCORDING TO THE MENDELIAN THEORY

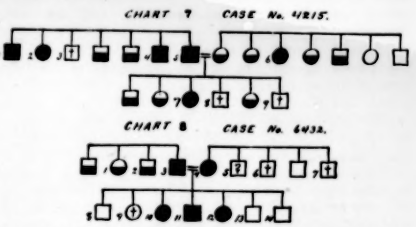
Types of Mating	Neuropathic Offspring		Normal Offspring	
	Actual Findings	Theoretical Expectation	Actual Findings	Theoretical Expectation
1. RR × RR × RR	54	64	10	0
2. DR × RR × DR + RR	190	214½	239	214½
3. DD × RR × DR	0	0	45	45
4. DR × DR × DD + 2 DR + RR	107	80½	215	241½
5. DD × DR × DD + DR	0	0	77	77
6. DD × DD × DD	0	0	0	0
Totals	351	359	586	578

accustomed to regard as representing independent clinical conditions. Family histories show, however, that these various clinical conditions are often found in members of the same family and that they are therefore not wholly independent but somehow related to one another. The question thus arises, What is the nature of this relationship? We shall have much to learn before we shall be able to answer this question fully, but the data which we now possess seem to indicate two types of relationship — that of conditions of different degrees of recessiveness and that of neuropathic equivalents.

As to the first type of relationship, some of the facts which are before us make it necessary for us to assume that the hypothetical germ-plasmic determiner for complete mental development is not a unit but a group of units out of which one or more may be lacking, and that the amount of this germ-plasmic defect determines in a large measure the type of clinical disorder. It appears in particular that manic depressive insanity, while recessive to the normal condition, is dominant over epilepsy. This relationship is illustrated in Charts 7 and 8, which have been constructed from the pedigrees of some patients at Kings Park.

As to the second type of relationship, that of neuropathic equivalents, the principle, as all know, is by no means a new one. It has long been the practice of clinicians to classify as epileptic equivalents such manifestations as delirious attacks, brief absences, spells of automatism, periodic dipsomania, and the like, and in more recent years, progress in psychiatry has been marked, under Kraepelin's leadership, by a far-reaching extension of the conception of clinical equivalents which resulted in bringing together many apparently dissimilar conditions into the two large groups of dementia præcox and manic depressive insanity. The only new point, in this connection, that has been derived from heredity studies is the indication that many conditions which have hitherto hardly been suspected of being related to one another are really neuropathic equivalents. As the most striking instance of such a relationship may be mentioned that of fainting spells or convulsions in childhood as an equivalent of dementia præcox.

Before leaving this topic it might, perhaps, be well to point out that it is not assumed that members of the same family or even the children of the same parents, if neuropathic, will necessarily present clinical equivalents.



Charts 7 and 8.—Pedigrees of some patients from King's Park State Hospital.

Chart 7.—1. Nervous prostration; in sanatorium four weeks; recovered. 2. Manic depressive insanity. 3. Died in childhood. 4. Manic depressive insanity. 5. Manic depressive insanity. 6. Epilepsy. 7. Manic depressive insanity. 8. Died in childhood. 9. Died in childhood.

Chart 8.—1. Daughter has fainting spells. 2. Son, queer and feeble-minded. 3. Fainting spells. 4. Recurrent attacks of depression. 5. Data unascertained. 6. Died in childhood. 7. Died in childhood. 8. Twenty-two years old. 9. Died in childhood. 10. Recurrent attacks of depression; several suicidal attempts. 11. Manic depressive insanity. 12. Attack of depression with suicidal tendency; recovered. 13. Twenty years old. 14. Fifteen years old.

On the contrary, there is very strong reason to believe that in most cases they are likely to have neuropathic conditions representing not equivalent defects but defects of different degrees of recessiveness. Theoretically it is easy to demonstrate that neuropathic offspring from matings of the fourth type only (DR × DR) will necessarily have equivalent defects.[3]

III. NEUROPATHIC CONDITIONS IN RELATION TO THE SCIENCE OF PSYCHIATRY

Let us now consider the influence that these new facts may have on the science of psychiatry.

In the first place, it seems obvious that our conception of the nature of neuropathic conditions must eventually undergo considerable modification. The conception of these conditions as disease processes, though it has proved to be of immense benefit in the past and has contributed perhaps more than any other factor to the progress of psychiatry, appears no longer tenable except in relation to organic affections. From the new point of view we are led to look on neuropathic conditions as a group of features characterizing special biologic varieties of our species, analogous in their mode of origin and in

their mode of transmission by heredity to such features as blue eyes, fair skin, light hair and the like. If they happen to possess greater sociologic importance, their biologic relationships are thereby in no way altered.

In the classification of neuropathic conditions we may gain new criteria for our guidance. Clinical facts, such as symptomatology, course, outcome, etc., or purely practical considerations, such as legal responsibility or need of enforced custody, will still be utilized, but it may be anticipated that the natural basis of classification in the future shall be a better knowledge of the biologic position of each distinguishable variety and of the conditions under which such varieties are produced, and on such a basis, as already indicated, we may be able to bring together widely differing manifestations as being merely neuropathic equivalents.

From the new point of view diagnosis shall mean the identification not merely of special types of reaction, such as necessitate commitment to custody, but of inborn, basic traits characteristic of the several neuropathic varieties. As is well known, attempts have been made to describe the various types of abnormal make-up which constitute the characteristic soil on which dementia præcox, manic-depressive insanity and other psychoses develop, but a need now arises for more than that; the need is for exact measurements and the definition of the neuropathic constitution in terms which will enable the physician to diagnose it with sufficient certainty for practical guidance even in the absence of strikingly antisocial manifestations. In other words, we shall introduce biologic methods into the study of the neuropathic varieties; we shall make in a large number of cases every possible physical and mental measurement directly or indirectly pertaining to neuropathic characteristics and compare them with standards established by similar measurements made on normal subjects.

Such, we may expect, shall be the influence of the light shed by the Mendelian theory on scientific problems in psychiatry. But still greater may be the influence on our practice as regards prevention and treatment, for prevention becomes largely a matter of eugenics and treatment a matter of palliative measures to combat antisocial manifestations.

I would venture, before closing, to consider the relation of studies in heredity to practical eugenics.

IV. HEREDITY AND PRACTICAL EUGENICS

One hears a great deal from all sides about the rapid increase of insanity. The alarm is caused mainly by the fact that in the past seventy or eighty years there has been a progressive though somewhat irregular increase in the annual number of admissions to institutions for the insane and that this increase has been proportionately greater than that of the general population. The real significance of this fact is, however, not fully understood.

It has been demonstrated over and over again that migration of populations from rural into urban districts results invariably in an increase of the alcoholic and syphilitic insanities and to that extent the apparent increase of insanity must be regarded as real. There are, however, other factors which operate to cause, not a real increase in the incidence of insanity, but merely an increase in the number of hospital admissions. One of these factors was demonstrated by Dr. Edward Jarvis in an admirable study published nearly fifty years ago.[5] He observed that the number of patients committed from any locality to a hospital for the insane depends in a large measure on the distance and on the means of transportation between that locality and the hospital. This principle was very convincingly demonstrated between the years 1843 and 1865 by the admission rates to the Utica State Hospital from all the counties of the state excepting New York and Kings, which had hospitals of their own. Dr. Jarvis divided all the counties into four districts: the first district was Oneida County, in which the hospital was situated; the second district consisted of eleven counties, namely, the first tier surrounding Oneida County, which were mostly within 60 miles of Utica; the third district included seventeen counties which were from 60 to 120 miles distant; and the fourth district included the most distant counties, being between 120 and 350 miles from Utica. From these four districts the average annual admission rates during the years mentioned were as follows: from the first district 1 to 2,772 in the general population; from the second district 1 to 5,820; from the third district 1 to 7,351, and from the fourth district 1 to 11,535. A thorough study of this question as it presented itself in a number of other states and in some parts of Canada furnished similar results in all cases without a single exception. Dr. Jarvis then studied the effect of multiplying hospitals in states.

> "This principle has been remarkably manifested whenever and wherever a second hospital has been opened in any state and placed in a district remote from the one previously in operation. The people who sent a few patients to the distant institution, now sent many to the hospital which was brought to their neighborhood. The number of lunatics that found a place of healing was suddenly and permanently increased."

From this it is easy to deduce one great cause of the apparent increase of insanity, namely, the increase in the number of institutions and the improvement in facilities for transportation.

It is not the object of this paper to treat exhaustively the question of the increase of insanity, but another distinctly appearing factor may be pointed out which may produce an illusion of such an increase, namely, fluctuations in the economic conditions of the country. Following the financial crises of 1903 and 1907 the number of admissions to the New York state hospitals in proportion to the general population increased by 8.4 per cent., and 7.4 per cent. over the admission-rates of the respective preceding years. Patients were admitted, who had for years been cared for at home or who had been themselves employed when the demand for labor was high, simply owing to the sudden change in the financial affairs of their relatives or to the falling off in the demand for labor, and not by reason of any real increase in the incidence of insanity.

Aside from the alcoholic and syphilitic psychoses, we do not really know to what extent, if any, the apparent increase of insanity indicates a real increase. Hospital statistics alone are hardly sufficient to give us an indication of the total prevalence of the neuropathic constitution in the general population. Times change, conditions change, and with them change the relations between the hospitals and the communities in which they are.

In a recent study of heredity[6] an attempt was made to estimate roughly by an indirect method the prevalence of the neuropathic constitution in the population of the Kings Park State Hospital district. That district is fairly representative, being partly urban and partly rural and showing on comparison with other state hospital districts an incidence of insanity not far from the

5. Jarvis, E.: Influence of Distance from and Nearness to an Insane Hospital on Its Use by the People, Am. Jour. Insan., 1865-66, xxii.

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general average. It was found that about 2 per cent. of the population were actually neuropathic, 30 per cent. were normal, but carried the neuropathic taint in their blood, and the remaining 68 per cent. were normal and without the neuropathic taint. Assuming for the moment that these various elements in the population will intermarry freely without the interference of selective influences or of any other disturbing factor, then it may be found by calculation that in the next generation the percentage of neuropathic subjects would rise to 2.89, that of those who are normal, but carry the taint, would fall to 28.2, and that of those who are normal and without the taint would rise to 68.89. In other words, insanity would increase, but at the same time a process of purification would take place through the segregation of normal traits and of neuropathic traits in separate elements of the population.

The influence of selective forces is difficult to determine. On the one hand, the higher death-rate among neuropathic subjects and some amount of elimination through sexual selection must tend to reduce chances of propagation. On the other hand, the lack of moral inhibition among them not infrequently leads to early marriages, rearing of large families, or illegitimate propagation. One thing would seem certain, namely, that those modern conditions which have the effect of increasing the admission rates and the permanent populations of hospitals for the insane must be regarded as forces which aid in the elimination of defective germ-plasm and which are, therefore, salutary.

Without doubt this process of elimination could be hastened by a well-organized eugenics movement, but it would seem that matters have come to such a pass that we may have the burden, not of spreading a propaganda, but of holding back enthusiasts from premature and ill-considered action. Laws providing for the sterilization of degenerates, defectives, lunatics, etc., have already been passed in Indiana, California, Washington, Connecticut, New Jersey, Iowa and Nevada. They have everywhere remained practically a dead letter and we are already having to deal with the reaction of alarmed conservatism. In other words, the net result of such legislation has been so far no good and much harm.

Even if it were possible not only to enact laws for the sterilization of neuropathic subjects, but also to enforce them, nobody to-day would be in a position to tell whether or not it would be desirable or on the whole profitable for the human race to do so.

It is now many years since Lombroso with his far-seeing vision was led to observe the kinship between the neuropathic constitution and genius. Whether we agree with him fully or not, the fact is that in dozens of cases the very highest types of human activity have been associated with neuropathic traits, and in many more they have been the products of subjects of neuropathic descent. Among those who have been frankly insane may be mentioned, in the sphere of literature, Swift, Cowper, Shelley, Lamb, Burns, Keats, Byron; in the sphere of musical composition, Schumann, Wagner, Glinka; and in the sphere of science and natural philosophy, Sir Isaac Newton and Auguste Comte. If it is true that genius, which, as Lombroso says, is "the one human power before which we may bend our knee without shame," is a neuropathic manifestation, then it must be obvious to every right-thinking person that wholesale sterilization would be hardly a measure of wisdom; on the contrary, genius must, at any cost, be allowed to thrive and is no matter for mediocrity to meddle with. But it may be that only certain types of the neuropathic constitution are related to genius, or that any existing relationship is not essential, but incidental. Who knows? The point is merely made that the time has not yet come for radical action. The immediate need is for further investigation.

Mainly through the efforts of Dr. C. B. Davenport the State Board of Charities has created a bureau for the investigation of pauperism, feeble-mindedness and epilepsy. At the present time, Dr. Gertrude Hall is at the head of the bureau. But steps have been taken to seek a legislative appropriation to provide for ten field workers to be employed in the work of tracing all pauperism, feeble-mindedness and epilepsy to their sources throughout the state, county by county. The State Board of Charities has nothing to do with insanity, yet it would add but comparatively little labor, in going over the field, to record the equally necessary data concerning insanity, while at the same time the project would gain energy from a union of the interests of the State Commission in Lunacy with those of the State Board of Charities.

MYOCARDIAL DEGENERATION

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Various terms, such as fatty degeneration, fibroid degeneration, myocarditis, weak heart; chronic cardiac insufficiency and senile heart, are sometimes applied to fairly distinct conditions, as for example, senile heart; but the symptoms supposed to indicate different forms of the disease may be caused by the same pathologic conditions. Again, various pathologic conditions may cause the same symptoms, and therefore an exact classification becomes impossible.

These affections are found more often in men than in women. Fatty degeneration is, as a rule, a disease of old age or at least of people past middle life; and fibroid degeneration also occurs much the most frequently in those past their prime, but it is commonly observed five or ten years earlier than fatty degeneration.

Fatty and fibroid degenerations of the heart-muscle are also classified clinically as myocarditis, which may be either acute or chronic. I wish, however, especially to call attention to conditions, commonly chronic in character, although the symptoms may be very acute — so acute indeed that not infrequently no warning is given before the person is seized with a sharp precordial pain, with a feeling that pulsation of the heart has ceased, or with faintness and dizziness, and he sinks back in his chair or falls to the floor and expires before any one can render assistance. Symptoms indicative of cardiac degeneration occur several years before the fatal termination in a few, but in the majority the symptoms extend over a period of only one to two years.

These degenerations seldom occur until after middle life, and they are commonly found either in the aged or in those prematurely senile, and are, therefore, sometimes considered under the head of senile heart. By many physicians they are all grouped under the head of myocarditis; but this name is so suggestive of a more active process that I think myocardial degeneration the better term.

Although there is pathologically a sharp line of demarcation between acute inflammation, fibrosis and fatty degeneration of the heart-muscle, in the majority of cases there is no way by which these various conditions

can be distinguished from each other clinically. On this account it appears best to consider them together, for not only the symptomatology, but also the prognosis and the treatment, with few exceptions, are essentially the same. These exceptions, whenever well marked, will be indicated.

Fatty degeneration of the heart includes two conditions, one in which the action of the organ, as a whole, is impaired by superimposed fat which does not necessarily interfere directly in any way with the muscular fibers; but the fatty deposit may penetrate between the muscular fibers so as to impede their action mechanically, to impair nutrition and ultimately to cause destruction of the fibers themselves by fatty degeneration. This occurs in general obesity and has been termed "fat heart." In well-marked cases it may be recognized clinically with a fair degree of accuracy.

In the other condition, owing to some obstruction or inflammation of the coronary arteries, nutrition is interfered with and the muscular fibers become more or less replaced by fat. This constitutes true fatty degeneration.

In fibroid degeneration the muscular fibers, owing to inflammatory action, are more or less completely supplanted by connective tissue. This usually occurs in limited areas, which are found most frequently near the apex of the left ventricle, in the posterior part near the auricle, in the interventricular septum, or in the papillary muscles.

Not infrequently the heart-muscle becomes hypertrophied in the early stages of any of these conditions in an attempt to overcome obstruction in the peripheral blood-vessels; but later, owing to disease of the coronary arteries with resulting deficient blood-supply to the heart-muscle, or to inflammation, with proliferation of connective tissue, which, contracting, diminishes the nourishment of the muscular fibers; these fibers then degenerate, the heart-wall becomes weakened and dilated, and incompetence follows. After death from myocardial degeneration, the microscope may reveal in the muscular fibers either fatty or fibroid degeneration or both combined in the same case.

ETIOLOGY

Fatty degeneration of the heart is due in most cases to the same causes as atheroma of the aorta, with extension to the coronary arteries. It is one of the natural results of advanced age, and is also attributed to gout, alcoholism, the toxic effects of tobacco, coffee, etc. Chronic diseases of the kidneys that increase the resistance in the arterioles throw increased work on the heart and lead to general arteriosclerosis, coronary sclerosis and myocardial degeneration. This degeneration may be caused also by protracted wasting diseases, exhausting discharges, or repeated loss of blood, anemia, etc.

Acute fatty degeneration may be caused by phosphorus poisoning, by the toxins of diphtheria, and by other acute infectious processes.

Fibroid degeneration which results from inflammation of the heart-muscle, when acute, is commonly of septic origin as in pyemia or as in diphtheria, typhoid and other infectious diseases. The chronic variety is often merely a continuance of the acute affection; but in other cases it is caused by rheumatic endocarditis with arteriosclerosis, or by obstruction of the coronary arteries by thrombosis or embolism which cuts off the blood-supply to certain portions of the heart-muscle. Thus it may have the same origin as fatty degeneration. Fibroid degeneration may result from excessive or protracted physical effort or even protracted mental strain and worry. In some cases it is undoubtedly one of the late effects of syphilis, and in many others it apparently results from the excessive use of tobacco, alcohol or coffee. It may also be due to chronic venous congestion of the heart as found in protracted emphysema, fibroid phthisis or mitral lesions, with consequent overgrowth of the connective tissue which causes pressure-atrophy of the muscle fibers.

SYMPTOMATOLOGY

The most important symptoms and signs of degeneration of the myocardium are: irritability of temper; melancholia; some loss of memory or hesitating speech; pain over the precordia or over the upper part of the sternum following exertion or mental excitement; palpitation of the heart; dyspnea on exertion and even without exertion (the so-called cardiac asthma); diminished endurance, physical and mental; alterations of the pulse, which may be either faster or slower and is often intermittent; and slight edema of the ankles. These are attended by more or less change in the physical signs over the heart due at first to some hypertrophy and increased force of the muscular action, but later to weakness of the contractions. There may or may not be appreciable enlargement of the organ, but often the signs are not at all distinctive until late in the disease. If the pulse varies from normal, being either strong or weak, slow or fast, and regular or intermittent according to the strength of the myocardium, a similar condition is found in the cardiac pulsations excepting that feeble cardiac pulsations do not always communicate an impulse to the radial artery, so that not infrequently there is intermission of the radial pulse when the heart is beating regularly, although some of its contractions are feeble.

When the symptoms are first noticed, the heart is usually of normal size, or slightly hypertrophied; but with degeneration, its impulse becomes enfeebled to a greater or less degree. In uncomplicated cases, on auscultation, no valvular murmur will be heard until late in the disease when the feeble walls have dilated so as to cause relative insufficiency. But when the degeneration has been caused by aortitis and disease of the coronary arteries, a more or less distinct sytolic murmur may be heard over the roughened aorta comparatively early. The most important signs at this time are feebleness of the heart-sounds and diminution of the force of the impulse against the chest-wall with lessening of the muscular element in the first sound of the heart. The muscular element of the first sound of the heart is the same as the sound produced by other contracting muscles, which may be readily recognized by listening with a stethoscope over the base of the thumb while its muscles are contracting. I call special attention to these symptoms and signs because often physicians hearing no endocardial murmurs and perhaps finding the action of the heart regular and of nearly normal frequency are led to think that there is no disease of the heart.

Not infrequently the degeneration progresses without symptoms, and no signs are discovered until an attack of dyspnea or fainting or a paroxysm of angina pectoris proves immediately fatal; but in most cases some of these prominent symptoms or signs precede the fatal termination several months or two or three years; yet any or nearly all of them may be absent. As a result of feeble circulation and passive congestion, or of emboli formed by vegetations or clots carried from the heart or aorta, many other symptoms and signs may appear in individual cases, most of which can readily be traced to their true source. Another significant symptom of fatty

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degeneration that sometimes occurs is pseudo-apoplexy, an attack in which the patient suddenly becomes unconscious and falls; this may be attended by paralysis, but the symptoms pass off within a few minutes or hours or at most a few days. The well-known Cheyne-Stokes respiration is also an occasional early symptom. Other symptoms frequently noticed are: comparatively rapid loss of weight after a person has been fleshy, pallor and a swollen appearance of the surface with congestion of the ears and lips, weight or pain in the head and disturbance of the stomach and bowels.

There are no symptoms or signs by which we can surely distinguish between the various forms of degeneration; but certain combinations may justify a fairly positive diagnosis in a considerable number of cases. For example, in a fleshy subject the occurrence of unusual dyspnea with irregular action of the heart or an abnormally slow, full and regular pulse, a weak impulse of the apex, feeble intensity of the heart-sounds and absence of most of the other symptoms and signs are presumptive evidence of fatty deposit on the heart which mechanically interferes with its dilatation and contraction. These symptoms are illustrated by the following history (65,196):

CASE 1.—A man, aged 68, consulted me on account of irregular action of the heart and some shortness of breath, which he attributed to excessive smoking. He was not sick but had noticed the symptoms first three years previously and they had been gradually increasing. He weighed 248 pounds and had been at one time up to 270 pounds. He had some dyspnea and a little edema of the ankles; but his chief symptoms were irregularity of the heart's action and palpitation at times. I found the pulse irregular and only 44 per minute; he complained of frequent eructations of gas from the stomach and moderate dyspnea, but there were no other symptoms. Physical examination of the lungs yielded only negative results. The heart was slightly enlarged, its impulse almost imperceptible, action slow but galloping, sounds only about one-fifth as intense as usual in healthy men, and no endocardial murmurs. These symptoms and signs seemed to indicate that the action of the heart was interfered with mainly by deposit of fat. The patient had already given up smoking but he drank three cups of coffee daily. This was interdicted and he was given strychnin arseniate and stomachic tonics with digestive agents.

Pain over the aorta following exertion, relieved by rest, and dyspnea with muscular weakness and more or less alteration of the frequency and rhythm of the heart, with feeble impulse and heart-sounds, and sometimes absence of the first sound of the heart with absence of signs of valvular disease speak strongly for fatty degeneration of the muscular fibers due to disease of the coronary arteries, following or associated with atheroma of the aorta. These are illustrated in the following history (47,919):

CASE 2.—A woman, 65 years old, came to me complaining chiefly of pain in the precordia, rapid action of the heart, and dyspnea. Her symptoms began about six months previously and her physician told me that she had asthma about that time, which appeared to be of cardiac origin. She complained of frequent attacks (two to four daily) of great weakness, faintness and nausea. Some of her pain was in the epigastrium and the dyspnea was present even without exertion. She had some rheumatic pains in both arms, but had not suffered from a frank attack of rheumatism. She had had years previously, both malarial and typhoid fever. She suffered from headaches and was quite nervous. She weighed 168 pounds, but had lost 12 pounds within a few weeks. There were varicose veins in the legs and some edema of the feet. Temperature normal, urine normal, appetite and digestion poor. The arteries were stiff, the pulse weak and irregular, varying from 92 to 156 during the examination. There was no endocardial murmur, but the dulness extended half an inch to the left of normal. Pulmonary signs were negative.

Usually also well-marked attacks of angina pectoris without many other symptoms speak for the same condition; later in the disease dilatation of the heart is commonly shown by the physical signs.

A certain group of symptoms occurring in persons near 70 years of age, or in those prematurely old, have been considered by Balfour under the name of senile heart. This class is illustrated by the following history (83,115):

CASE 3.—In 1907 I saw in a neighboring state a man whose life had been prolonged by good care for over four years, when I last heard of him through his family physician. At the time I was called to see him he was 69 years old and had been suffering for two months with weakness, much dyspnea, a sensation of tightness in the chest and dizziness if he moved quickly. There was nothing in heredity or previous disease to account for the trouble; but he dated his symptoms from a fall that had occurred two months previously. He had used tobacco moderately until two weeks before I saw him and was still using tea and coffee moderately. He had not used alcoholics. He had a little pain over the sternum and precordia; weighed 135 pounds; slight edema of ankles; two degrees subnormal temperature; digestion fair; urine normal; pulse full and soft, but only 37 per minute. Physical signs over lungs, liver and spleen were negative. Heart was normal size, pulsations 37 per minute, regular except one imperfect contraction about once a minute. There were no valvular murmurs, but a ventricular murmur not heard at base of heart and not transmitted beyond ventricles. The subnormal temperature and the slow pulse have continued for four years, but the patient has improved somewhat in other respects.

A strong probability of fibroid degeneration of the heart-muscle is established when the patient suffers from dyspnea and pain over the heart on exertion, and the signs indicate that the organ is enlarged by hypertrophy and dilatation or simple dilatation, especially if the history points to a remote cause of myocarditis in such affections as malarial or typhoid fever, scarlatina or diphtheria, syphilis, gout or alcoholism. This class of cases is illustrated by the following history (50,577):

CASE 4.—A man, 53 years old, complained of pain on exertion over the base of heart and aorta which had troubled him for a week. A year previously, after lifting a heavy weight, he had considerable pain over the aorta. This soon passed off, but returned while he was walking a couple of hours afterward, so that he had to stop and rest until it disappeared. Then it returned off and on for a week or ten days on exercise, but subsequently it did not trouble him until a few days before he saw me. I found that he had suffered a severe attack of scarlatina followed by nephritis when a boy, and that all his life afterward he had been subject to irregular action of the heart, and he had noticed some gouty nodules nine years before he first experienced aortic pain. I learned that at times he tired very easily. His temperature was normal, arteries stiff and the pulse, regular and full, ranged from 82 when quiet to 90 or 100 on exertion. There was little dyspnea on exertion. The signs over the lungs and abdominal organs were negative, and the heart normal in size and action, but there was a slight increase in the area of dulness over the aorta with a feeble systolic murmur and some accentuation of the second sound of the heart. The heart-sounds were not so loud as normal and the force of the impulse was diminished, but there were no endocardial murmurs. All coffee and stimulants were given up and under the influence of arsenic, strychnin and moderate doses of potassium iodid with care about exercise, he improved, although occasionally there would be some pain and shortness of breath. This continued for four months, when he suffered a mild attack of angina pectoris. At this time no aortic murmur was present, but other signs

continued the same. A few days later a sharp attack of angina proved fatal in about twenty minutes. Necropsy revealed atheroma of the aorta with slight dilatation, and marked sclerosis of coronaries with thickening of heart walls and extensive fibrosis. There were no valvular lesions.

In most cases the different forms of degeneration cannot be distinguished clinically, and in fact the fibroid and fatty degeneration are often combined; therefore, it is hardly worth while to try to draw a sharp line of demarcation between them. Usually the symptoms and signs merely point to weakness of the myocardium and many of them result from venous congestion due to setting back of blood from the right ventricle. Edema of the skin, particularly about the ankles, and some cyanosis are among the first manifestations of this condition. Obstruction to the flow of blood from the renal veins causes scanty, dark-red urine of high specific gravity, containing an excess of urates, small amounts of albumin and hyaline tube casts. Congestion of the hepatic veins causes enlargement of the liver, which is apt to be sensitive on palpation or which may cause the patient to complain at other times of a sense of weight, tension, or actual pain in that organ. Extension of venous stasis to the portal veins causes disturbance of the digestive organs manifested by eructations of gas, flatulence of stomach and bowels, loss of appetite, nausea, vomiting and irregular action of the bowels, or by the development of hemorrhoids. The spleen also becomes enlarged and hard and perhaps painful, and ascites may occur. Stasis in the intrathoracic veins causes obstinate bronchitis and hypostatic pleurisy, or pneumonia, and may be attended by hemoptysis. The jugular veins may be enlarged and tortuous, and hypostatic catarrh of the upper air-passages and throat is not uncommon.

Congestion of the cerebral veins and poor arterial circulation in the brain, both of which result from the weakened condition of the myocardium, give rise to various cerebral symptoms such as headache, dizziness, faintness, insomnia, mental hebetude, slow speech and an irritability of temper that often calls for explanations by the physician in order that friends may be patient and charitable with the sufferer. In some cases it is very interesting to note the prompt effect of heart tonics in improving the mental condition.

Severe paroxysmal cardiac pain termed angina pectoris is generally associated with atheroma or sclerosis of the aorta and coronary arteries and resulting fatty degeneration. The paroxysm itself is supposed to result frequently from an embolus. Cutting pains sometimes felt in the heart appear to be of rheumatic or gouty origin.

DIAGNOSIS

As already stated, the differential diagnosis of the various forms of cardiac degeneration is most difficult. There may be no alteration whatever in the size or force of the heart, and commonly there are no endocardial murmurs; therefore the diagnostician must rely largely on the history and personal peculiarities of the patient and the presence of a few of the numerous symptoms that may attend such cases, together with the exclusion of other affections. Fatty and fibroid degenerations of the heart are liable to be mistaken for functional affections, especially when occurring in those who have not yet reached middle life. Symptoms of heart weakness developing in a young person are likely to be functional; but in a person past 50 years of age they usually result from some organic change.

The most important differential feature is shown by the effect of exercise, which has but little immediate influence on functional affections, but which increases the pain, dyspnea and cardiac disturbance when the myocardium is degenerated. The age of the patient, the precordial pains, the condition of the arteries, the blood-pressure, the position and force of the apex-beat and the heart's rhythm are the most important factors in establishing the diagnosis; but the symptoms referable to the brain, kidneys, liver and other vital organs must be carefully weighed, and other diseases should be systematically excluded.

PROGNOSIS

The prognosis will depend largely on heredity, the age and strength of the patient, his ability and willingness to take proper care of himself and his response to judicious treatment. Other things being equal, the patient whose ancestors were long-lived has the best chance to improve. The younger the patient, the better his outlook. If his general strength is good it indicates a condition of the myocardium susceptible of improvement. If he is able and willing to follow proper instructions it is greatly in his favor. So long as the myocardium responds to heart tonics, betterment may be expected; but when degeneration has progressed to such a degree that digitalis and nux vomica have but little effect, no reasonable hope can be entertained that the patient will live long, and a few months, or at the most a year or two will generally finish the history.

Fatty deposit and infiltration, while *per se* much less serious than fatty or fibroid degeneration, may produce either or both of these conditions by mechanical pressure unless efficient measures be taken to check them; however, restriction of diet and suitable exercise may nearly or quite remove the difficulty. Yet these subjects are very liable to succumb to pneumonia, bronchitis, or any acute exhausting disease, and they occasionally die by syncope.

Often in fatty degeneration death comes suddenly from syncope, or a little more slowly from angina sine dolore, or from agonizing attacks of angina pectoris. In the latter, death may follow the first symptoms in from half an hour to two or three hours during the first attack; or it may be delayed until the second or third seizure, which is likely to occur within a few months or at most a couple of years. With care, however, appropriate management and good luck the patient may possibly hold out for several years. In degeneration due to permanent interference with the blood-supply repair is impossible, although life may be prolonged by proper care; but in the acute affection resulting from general blood conditions it is possible for complete recovery to take place.

Fibroid degeneration may terminate in the same way as fatty degeneration, but usually the symptoms of cardiac failure are more prolonged and the patient is liable to suffer for a year or two or even longer with the pronounced symptoms of the affection, such as pain, dyspnea, palpitation, dizziness, digestive disturbances, edema and physical and mental weakness. Finally, the disease commonly terminates in sudden death, or by a paroxysm of angina pectoris of several minutes' or a few hours' duration. Myocarditis which only causes arhythmia is considered more favorably than other types. In myocarditis attended by sclerosis of the coronaries (which may be suspected from atheroma of the palpable arteries or of the aorta, with angina pectoris) sudden death may be expected at any time. Myocardial degeneration associated with diabetes or

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chronic nephritis has a very bad prognosis. Intercurrent bronchitis or influenza is always a grave complication in this disease, and pneumonia is almost surely fatal.

TREATMENT

Fatty deposits on and in the heart call for restricted diet and regular exercise, that will vary much with the persistence and tractability of the patient and the judgment and force of the physician. Fat-producing diet should be diminished and at the same time care must be taken that nitrogenous foods are used only in proper amount and that the ingestion of fluids is not excessive, especially at meal time. I am firmly convinced that obesity depends less on the quality than the quantity of food and drink. Most fleshy people claim to be small eaters and we may admit that such is sometimes the case; but so far as my own observation goes, nearly all fleshy people are great eaters. For such patients the most important factor in getting rid of their excess of fat is reduction of the quantity of their food. At the same time a reasonable amount of exercise should be demanded; but it is useless to require exercise to "work off the flesh" while the patient is eating all he wishes, for the exercise increases the desire for food and for liquids so that more flesh is apt to be gained than is taken off, except with the very few people who will faithfully follow instructions in limiting the amount of food ingested.

The treatment of fatty and fibroid degeneration and of chronic myocarditis is essentially the same; therefore in this respect we are not hampered by the difficulties of diagnosis. If the heart-muscle is weak from either of these conditions the causes of such weakness must, if possible, be removed; the work demanded of the organ must be diminished and persistent and protracted efforts must be made to increase the strength of the myocardium.

The general treatment is essentially the same as that for valvular disease with broken compensation, consisting of cardiac and general tonics and the elimination of all injurious factors.

Patients should be cautioned to do nothing that induces dyspnea, and to rest immediately whenever shortness of breath appears. In severe cases the patient should be kept in bed until the heart has rested and recuperated. Excessive efforts of all kinds, mental and physical, must cease. If the affection is the outcome of some infectious disease, of pneumonia, or of protracted fever or of syphilis, treatment should be directed first to the causative disease. If it has resulted from excesses of any kind these should at once be abandoned. Alcoholics, tobacco and coffee should be interdicted in practically all cases. Contraction of the arterioles should be relieved by iodids or nitrites and high blood-pressure may be further reduced by proper diet and the proper use of saline laxatives and diuretics. The skin must be kept active by baths, friction and occasionally diaphoretics. Mental and physical exercise must be regulated according to the patient's strength and in severe cases absolute rest may be required. The digestive and excretory organs should receive the physician's careful and constant attention. The myocardium must be strengthened by appropriate resistance-exercise, massage, or moderate walking; and also by heart tonics, chief among which are digitalis and nux vomica. These in combination will often give much better results than either by itself; and either or both often have to be given in much larger doses than are commonly prescribed. At first, they should be given in moderate doses, but the quantity may be steadily increased, while the effects are carefully watched, until the desired results are obtained, or until the beginning of toxic symptoms shows that a maximum dose has been reached. One need not fear the cumulative effects of digitalis when only three doses are being given daily so long as the stomach is not disturbed and the kidneys are acting freely; but nausea and vomiting or diminution in the amount of urine indicate that the dose must be decreased or the remedy discontinued. Similarly there is no danger from gradually increasing doses of nux vomica, but the occurrence of spasmodic contractions of the muscles or of insomnia call for suspension of the drug, or reduction of the dose. Iodids, especially those of potassium and sodium, in moderate doses and usually long continued are most beneficial in relieving pain and in dilating the arterioles. Nitroglycerin, amyl nitrite or sodium nitrite may be employed in similar cases for quick action. Arsenic is often found most beneficial in relieving pain and at the same time it may strengthen the heart-muscle. Other drugs commonly recommended for strengthening the heart-muscle are generally most disappointing, although they occasionally answer the purpose and therefore should be tried when for any reason the more effective medicines cannot be used. Caffein citrate has properties similar to those of digitalis, although it is much less reliable. Theobromin, in doses two or three times as large as those of caffein, acts similarly but has an advantage in not causing contraction of the arterioles and in not causing so much insomnia. Theobromin is especially useful for its diuretic action. Spartiene sulphate in doses of from half a grain to 2 grains appears to have considerable influence in regulating the rhythm of the heart and increasing the flow of urine. Strophanthus is thought to act in the same way as digitalis, but from prolonged observation it appears to me useful only in controlling the action of the heart when nervous symptoms predominate. The other remedies in common use for strengthening the heart's action, such as adonis vernalis, convallaria majalis, cannabis, etc., have appeared to me utterly unreliable. Severe pain must sometimes be relieved by morphin and atropin or chloroform, and distressing dyspnea or general discomfort and nervousness may require the same remedies; but opiates should not be used, if they can be avoided, until it becomes clear that nothing else will give sufficient relief, and until our main efforts are directed to promoting euthanasia. Chloroform may be inhaled with perfect safety and with great relief, provided it is given properly. The best way to administer it in such cases is to place about a dram on a sponge large enough to about fill one-third of a two- or three-ounce wide-mouthed bottle. This should be held by the patient, who should inhale deeply and freely from the mouth of the bottle until relieved. Before an excess of chloroform can be obtained in this way, the bottle will be dropped and roll away.

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The Nature of Fear.—We may say then that fear is a phylogenetic fight or flight. On this hypothesis we recognize no reverberation through the body as suggested by James, but all of the organs and parts of the entire animal are integrated, connected up or correlated, for self-preservation by activity of its motor mechanism. We fear not in our hearts alone, not in our brain alone, not in our viscera alone, but we fear in every organ and tissue of our body—each organ or tissue is stimulated or inhibited according to its help or hindrance in the physical struggle for existence.—Crile in *Med. Herald.*

ACNE VULGARIS TREATED BY AUTOGENOUS VACCINES

REPORT OF ONE HUNDRED CASES AND METHOD OF PROCEDURE

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The essentials of success in the administration of vaccines in the treatment of acne are the knowledge and experience necessary so to determine the dosage and intervals between inoculations as to elicit the desired immunizing response. In giving the dosage it is necessary to take into consideration the general condition of the patient, together with the degree of virulency of the infecting organism, also the reaction and resistance of the patient to most efficiently bring the resulting antibacterial substances which are carried by the blood into the focus of infection.

From the many factors modifying the dosage it is quite evident that no rule can be laid down and adhered to; the accompanying table, however, shows the beginning average dose.

TABULATED REPORT OF ONE HUNDRED CASES OF ACNE VULGARIS TREATED BY AUTOGENOUS VACCINE

Variety of Secondary Infections	No. of Cases.	Average Initial Dose of Accompanying Organism (Million)	Average Initial Dose of Acne Bacillus (Million)	No. Patients Cured	No. Improved, Not Cured, Treatment Not Finished or Unsatisfactory
Staphylococcus albus.....	86	100	5	81	5
Staphylococcus albus and *aureus* together	10	120	5	8	2
Staphylococcus aureus ...	3	150	5	3	0
Staphylococcus albus and *staphylococcus citreus*..	1	100	5	1	0

The staphylococcus vaccine is increased by the addition of one-eighth or one-fourth of the initial dose every other day until a response is elicited, after which the dose is held stationary as long as the patient is improving, the interval between dosage is then governed by the length and degree of the negative phase. The acne baccillus vaccine is given separately from the accompanying organism, although at the same time.

The acne pustule is formed by the secondary infection or implantation of the accompanying pus-forming organism on the sebaceous material or comedo which is evidently one of the products of the excessive stimulation of the sebaceous glands by the acne bacillus or its toxin. The depth of the pustule and the extent of the induration depends on the duration of the infection together with the depth and character of the comedo. Comedones that penetrate deep are of soft consistency and small in caliber and are associated with the so-called acne indurato or deep-seated acne pustule.

The many classifications of acne are modifications of simple forms produced by the various types of secondary infections at some time in the course of the disease, which depends on its virulency and its saprophytic power together with the variation and combination of the types of organism present.

ACCESSORY TREATMENT

In all cases of acne it is essential to watch and modify the coagulability of the blood one way or the other, to produce immediate results. In case the coagulability of the blood is rapid or the viscosity increased, the patient is given three or four 40-grain doses of sodium citrate. On the other hand, where the coagulability is slow and they do not start off with improvement, they are given six or eight 10-grain doses of calcium lactate. I find that of the two drugs, a greater number of the patients require calcium lactate. Most cases require a general tonic.

The patients are instructed to take a mild laxative such as they are accustomed to or that which to them is the most efficient and that only when it is necessary to produce one movement a day.

As regards the diet, unless they have some fad or craze for some particular injurious article, it is not modified, otherwise they are left to their own discretion and usual mixed diet. They are instructed to discontinue the use of coffee, tea, alcohol and tobacco if used to excess.

The patient is instructed to use liberal quantities of soap and water while the process is active. All the comedones are removed and all mechanical means possible are used to prevent the extensive accumulation of pus. After the active process quiets down so that there is no likelihood of scattering the infection, the patient is instructed to have daily massage in order to break up the scar tissue and to increase the local blood-supply.

BACTERIOLOGY

The acne bacillus is present in all cases. In some cases, however, it is very hard to isolate and grow, yet with patience and perserverance I am able to grow it in every case.

The surface of the infected area is cleansed with soap and water; then a number of the blackheads or comedones are squeezed out and with these some of the superficial epithelium is gently curetted off. This epithelial débris is mixed with the comedones, the whole is heated for one hour to 60 C., then planted, or rather daubed, on 1 per cent. oleic-acid agar incubated at 37.5 C., on which the growth appears in from five to ten days.

In 86 per cent. of my cases the accompanying organism was the *Staphylococcus albus*. In 10 per cent. the accompanying organism was the *Staphylococcus albus* and *aureus* together; in 3 per cent. the *Staphylococcus aureus* alone. In 1 per cent. the *Staphylococcus albus* and *Staphylococcus citreus* together.

THE PREPARATION OF THE VACCINE

With following exceptions the routine of preparation is essentially the same as that outlined by Wright.

The culture is taken in the ordinary way, grown at 37.5 C. until a growth appears, each organism isolated, then quickly highly rejuvenated either by running through a series of different media generally first to gelatin, blood-serum then to glycerin agar from which the vaccine is made, or better, by inoculating the original pure culture accompanying the acne bacillus into the blood-stream of a guinea-pig. After a few hours (as a rule ten to fifteen) the guinea-pig usually succumbs, at which time, or just previous to it, a culture is taken from the blood of the pig on glycerin agar.

This gives a highly virulent culture, however; grown at 37.5 C. it causes a most marked reaction which is very undesirable and irksome to the patient. I have found that this highly virulent organism grown at 36.5 C. does not produce so violent a reaction as when given in the same dosage as those of the same virulency grown at 37.5 C.; they are also apparently more efficient.

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THE EFFECTS OF THE ACNE BACILLUS OR ITS TOXINS

The acne bacillus apparently gives off a toxin that is in turn thrown into the blood which renders the patient more susceptible to the effect of any indiscretion in diet. This toxin in women lowers their resistance to the organism accompanying the acne bacillus during the drain of menstruation thus causing an aggravation of the local symptoms during this time.

This same acne bacillus toxin is no doubt to a very marked degree responsible for the poor circulation, malaise, mental and physical lassitude, anemia, chlorosis, headache, constipation and the nervous irritable condition so often found associated with acne infections.

I am convinced that such is the case because invariably patients treated with autogenous acne vaccine, when given in small enough doses not to produce a prolonged or permanent negative phase, were gradually, partially or wholly relieved of the associated symptoms above referred to. The constipation and headache are first to disappear, the feeling of mental and physical lassitude slowly improves and the nervous irritable disposition is in turn modified. The musculature of the skin regains its normal tone and color.

My results have not been satisfactory in regard to clearing up the sequelæ or complications when using a stock acne vaccine.

CONCLUSION

The results are so uniformly good that where one can control the patient, a cure of the condition can be promised in every case. The sequelæ are either greatly modified or entirely disappear; hence I believe that the acne bacillus or its toxins are responsible for the associated symptoms and conditions occurring in acne infections.

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THE PERIURETHRAL COMPLICATIONS OF STRICTURE

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Every organic stricture of the urethra, with the possible occasional exception of the traumatic variety, is associated with some form of chronic inflammation due to a persistent cryptic state of infection. Indeed, it may be confidently asserted that the ordinary type of stricture, the so-called inflammatory type, is primarily merely a phase of chronic urethritis. Owing to the overshadowing significance of its mechanical effect on the upper urinary tract, stricture is too frequently regarded as a complete morbid entity. The rôle of local infection is by no means a minor one, however, when the possible results are considered. The danger lies not in the urethra itself, but in the propagation of the infection into the surrounding tissues. Depending on conditions, there may occur here a variety of states of inflammation, from a pea-sized sclerotic nodule, discovered only by palpation on a sound, to the most acute, rapidly spreading, gangrenous phlegmon.

The scope of this paper will not permit of details, nor need it be encumbered by references to cases coming under my observation. It will suffice for its purposes to present certain deductions gathered from personal experience, supplemented by a study of important contributions to the literature on the subject.

To comprehend readily the periurethral conditions arising during the course of a stricture a knowledge of certain relevant features connected with the pathologic anatomy of the strictured urethra is at least helpful. Posterior to the stricture dilatation of the urethra is the rule. The view was formerly held that this dilatation is merely a mechanical effect of increased urinary pressure, caused by the stream of urine being forced against an obstruction. According to the view now generally accepted, there is some stagnation of urine behind a stricture, a kind of urethral retention and this condition, as retention elsewhere, predisposes to infection, which, being chronic, invades the subepithelial tissues of the urethra, causing a loss of tone of its musculature.

The classical researches of Halle and Wassermann and of Finger on the microscopic anatomy of chronic urethritis have demonstrated that the pathologic changes largely reside in the urethral glands and the periacinar tissues. They consist of the slow evolution of a sclerotic process, frequently involving the spaces and trabeculæ of the erectile tissue. That the seat of these changes should be mainly in and about the glands of the bulbous and membranous urethra follows from the anatomic fact that these regions are particularly rich in glandular structures. Motz and Bartrina have described three distinct groups, glands of Littré in the membranous urethra, Cowper's glands and a group of intrabulbar glands. The remarkably persistent chronic infection of these glands plays an all-important part in periurethral suppurations in the perineum. It is through them that the organisms are transmitted to the surrounding tissues.

The inflammations which originate in the urethra and extend without may be classified on a broad basis, partly clinical, partly pathologic, as follows:

I. Acutely exudative.
  1. Perineal abscess.
  2. Perineal phlegmon.
    A. Without urinary extravasation.
    B. With urinary extravasation.
    C. With gangrene.

II. Chronic exudative.
  1. Periurethral nodes.
  2. Progressive perineal sclerosis.

The perineal abscess needs no special comment. Its origin is usually in the periglandular tissues, sometimes situated quite deeply in the perineum. Alexander, noting recurrence after simple incision and drainage, has ascribed his failures to neglect of these deeper foci. He now carefully seeks them by rectal palpation and has so extended the operation on perineal abscess as to include an external urethrotomy and provide for free drainage into the abscess cavity of all suppurating recesses, for which simple incision of the abscess would not suffice.

Perineal phlegmon, generally, but somewhat misleadingly, called urinary infiltration or extravasation, is a condition well known to the older writers. John Hunter had a very precise conception of it, a conception which, even without the aid of bacteriologic knowledge, quite accords with that entertained to-day. Hunter appreciated the dominant part played by the extension of inflammation from the urethra. In the latter half of the last century, however, a different aspect was cast on the causation of periurethral phlegmon by Voillemier. An attempt was made to explain it on wholly mechanical grounds in the sense that the presence of urine in the tissues was the effective cause. The patient was represented as making strenuous efforts to urinate, when suddenly his agony was relieved with a sharp pain in the perineum, and, though he felt quite aware of having emptied the bladder, no urine passed from the meatus.

Instead the perineum presented a sudden swelling, the beginning of a severe, rapidly spreading phlegmon. In other words, the patient had urinated into the tissues.

Now it cannot be denied that there is some mechanical force at play. For example, a case has been described, the conditions having been actually witnessed (Tedenat). As the patient was about to mount the operating-table, on which he was to be cut for stricture, he made a violent effort to urinate. This was immediately followed by a swelling of the perineum, which on incision proved to be caused by urine. But while the mechanical factor cannot be ignored, the cause of periurethral phlegmon must be ascribed in the large majority of instances to the mere extension of an inflammatory process through a tissue, which, at one time serving to protect the healthier tissues beyond, has undergone devitalization owing to a gradual failure of its blood-supply. Its vessels have become contracted owing to an endoperiarteritis. Infection is then the main, if not the sole, cause of the condition under discussion.

The degree of inflammation depends on the infecting organisms far more than it does on the presence or absence of urine. The experiments of Menzel, Tedenat and Partridge have demonstrated the innocuousness of sterile urine, when injected into the tissues, experiments that have received clinical confirmation in uncomplicated cases of bladder rupture. Yet, contrary to the opinion of some writers, I believe that urine slowly leaking into tissues invaded by most virulent organisms must play something more than an innocent part. Though severe enough, even in the absence of urine, the inflammation is more severe, more rapidly spreading and more destructive, when urine is present. Just why this should be becomes a matter for speculation. The urine itself, apart from the involvement at the site of urethral perforation, may be septic, it may act purely mechanically by rapidly opening up unprotected tissue spaces, or it may so devitalize the tissues as to make them an easy prey to the organisms taking part in the process.

Albarran and Banzet, and several years later Albarran and Cottet, have worked out the bacteriology of periurethral inflammations. Beside the colon bacillus and streptococcus, anaerobic organisms have been found in the severer cases. The presence of these anaerobic organisms is of decided significance. They account for the violent character of the inflammatory process, which frequently terminates in gangrene.

The treatment of these acute conditions is so well known as to make it unnecessary to refer more than casually to it. It must be remembered, however, that the phlegmon may spread well up on the abdominal wall and that the incisions made to cope with it must be long and generous.

Like the acute inflammations of the periurethral tissues, the chronic also begin about the urethral glands. But here a definite wall of new connective tissue, constituting the important clinical feature, surrounds the inflammatory zone. This develops insidiously, possibly in response to an attenuated infection, often without the patient being aware of the presence of any swelling. It may remain quite stationary, without further development, forming a periurethral nodule. Generally, however, the inflammatory process progresses by slowly encroaching on the connective tissue defences. More connective tissue is laid down at the periphery until gradually, perhaps in the course of months, a mass of considerable size fills the perineum. From the fact that it sometimes reaches such proportions as to suggest a tumor, the term "urinoma" has been applied to it. The developing mass may be said to propagate along two general directions, in a forward direction following the course of the urethra from the site of its usual origin about the bulb, passing beneath the pubic arch to the penoscrotal junction, and in a downward direction toward the skin covering the perineum.

This irregular mass of firm tissue, exhibiting little or no tenderness and characterized by an apparent indolence, is nevertheless subject to more or less frequent attacks of acute suppuration. The abscess may rupture into the urethra, or, becoming attached to the skin, may rupture externally. If rupture takes place in both directions, a fistulous tract results. Subsequent attacks of acute inflammation may determine fresh fistulas.

The problem of dealing with the larger mass is well settled. I believe it better surgery, before attempting to remove it, to incise and drain for a week or two any abscesses which may be present. In the case of the periurethral nodule, however, the problem is not so simple. One is forced to resolve an answer to the question of the expediency of operation. Shall the stricture be dilated with instruments progressively increasing in size in the hope, that, as dilatation progresses, the inflammatory focus may become resorbed? Or, on the other hand, bearing in mind that from just such a small focus a serious phlegmon may arise, is it not more advisable to operate and drain or excise the focus, at the same time performing an external urethrotomy? The answer will be suggested by the circumstances surrounding each case and the judgment of the surgeon as to what extent he will permit himself to be governed by the element of chance or probability.

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SUMMARY

1. The periurethral complications of stricture are of an infectious nature.

2. Inflammation may be acute, leading to a circumscribed abscess, or hyperacute, leading to a phlegmon rapidly involving the perineum, scrotum and abdominal wall.

3. In the latter event the presence of urine is of secondary significance.

4. Inflammation may be chronic and is then characterized by a progressive development of new connective tissue, possessing little resistance to infection, and therefore frequently the seat of limited suppuration.

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A CASE OF PANCREATIC GLYCOSURIA *

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Although numerous theories have been evolved in explanation of diabetes mellitus, that it occurs as a result of pancreatic derangement seems a well-established fact. Experiments have shown that when the pancreas is extirpated diabetes results and that the glycosuria bears a direct relation to the amount of gland removed. It has been further shown that cessation of the flow of pancreatic juice is not the causative factor, as diabetes does not follow when the duct is ligated or when the juice escapes externally through a fistula. The conclusions of Opie tend to prove that the groups of cells known as the islands of Langerhans constitute the portion of the pancreas concerned in the production of pancreatic diabetes and that these islands are not only involved in organic diseases of the gland, but are also subject to a peculiar hyaline degeneration.

* Read before the Adjunct Faculty of the Medical College of Virginia, Feb. 15, 1912.

In recent years the work of pathologists and experimental investigators has been amplified and added to by the surgeons, and to them, perhaps, more than to any other class of workers, is due the credit for our practical knowledge concerning diseases of the pancreas, their causation, extent and results. Moynihan[1] states that the close relation between the common bile-duct and the pancreatic duct and pancreas accounts for the frequent association of pancreatic disease with infections of the gall-bladder and ducts. Also that in the earlier stages pancreatitis may disappear after the removal of a cause, such as gall-stones. He makes the point, however, that there is a stage in pancreatitis from gall-duct disease beyond which drainage has no effect and the process is progressive.

Robson[2] in an interesting article on "Surgical Treatment of Certain Cases of Glycosuria," makes the following observations: By far the greater number of cases of glycosuria due to pancreatitis are dependent on inflammation of the catarrhal type, in which the gland is invaded by way of the ducts from varying causes, such as gall-stones, pancreatic calculi, duodenal catarrh from ulcer, typhoid fever, etc., and a considerable proportion of these cases may be relieved by removing the cause. At a later stage an interstitial inflammation is produced which may be arrested, though the damage already done to the pancreas cannot be repaired. At a still later stage, cirrhosis of the gland takes place and if the islands of Langerhans have been extensively involved, surgical means are useless. He remarks further that the early recognition and treatment of interstitial pancreatitis or of pancreatic catarrh by drainage of the bile-ducts, and thus indirectly of the pancreatic ducts, and the removal of the cause, whether that be gall-stones, duodenal ulcer or other conditions, may be the means of averting diabetes. In certain cases even after the appearance of glycosuria, surgical treatment is well worth considering, as in a number of instances it has led to a complete disappearance of sugar from the urine by arresting the disease causing the glycosuria.

I have had the opportunity of observing the following case:

History.—Miss E. L. P., aged 45, was first examined July 26, 1910. She complained of weakness and nervousness; family history was unimportant. Past history shows that she had suffered considerably with distention and belching, and had been subject to attacks of terrific pain in the right lower abdomen. The longest attack lasted ten days and was associated with extreme local tenderness and she could not straighten out the right leg or lie on the left side. The attacks were always associated with vomiting, pain radiating beneath the right lower ribs, and on one occasion the attack was followed by jaundice. Physicians who saw her disagreed as to whether her trouble was appendicitis or biliary colic. Appetite was good, at times ravenous; thirst was excessive. Two years prior to this examination sugar was found in her urine and at that time she was voiding large quantities, as much as 7 pints in twenty-four hours, but was passing smaller quantities at the time of the examination. She had lost 20 pounds in weight in the previous eighteen months. For the previous few months she had been feeling weak and tired in the mornings, and was very nervous and unable to sleep.

Examination.—Tenderness on pressure was noted over McBurney's point. There was also a tender point above and to the right of the navel and a suggestive gall-bladder block. The urine at the time of the first examination was slightly increased in quantity and showed 0.97 per cent. sugar, or 9.27 gm. in twelve hours. The patient was then put on a restricted diet and three successive examinations of the urine at intervals of two weeks showed it to be sugar-free.

In September, 1910, she was seen by me in an attack of acute abdominal pain, accompanied by chills, fever and vomiting. The pain radiated to the right shoulder and back. There was pronounced tenderness and rigidity over the whole right side of the abdomen. Following this attack, sugar reappeared in the urine, to disappear again shortly after the attack subsided and the patient had resumed her diet. Subsequent examinations over a period of several months showed absence of glycosuria. It was thought that this patient's trouble lay in a gall-bladder disease with an associated pancreatitis, and operation was advised in the hope of averting future attacks and also of relieving the glycosuria.

Operation and Postoperative History.—She was operated on by Drs. Johnston and Willis, Jan. 14, 1911, the gall-bladder drained and a diseased appendix removed. The pancreas was enlarged and indurated and the gall-bladder showed a chronic inflammation with no stones. Following operation, sugar reappeared in the urine, although it had been absent for several months previous, even with the patient on a fairly general diet. Specimens examined during the next two months varied, some showing a trace of sugar, others being sugar-free. Since April, 1911, specimens obtained at irregular intervals were sugar-free.

The patient steadily improved in health since the operation and had no return of colics. She was last heard from in January, 1912, and at that time was said to be in better health than for several years previously.

The above case presents several interesting points. At the time the patient was first examined, the cardinal symptoms of so-called "true diabetes"—glycosuria, thirst, polyphagia, polyuria and emaciation—were all present. This condition not only showed a tendency to fluctuate under an indifferent plan of treatment, but the patient afterward passed through a heavy abdominal operation without the slightest intimation of lack of healing or infection on the part of the tissues. The glycosuria apparently bore a direct relation to pancreatic involvement, increasing after an acute attack and after operation, and decreasing with the disappearance of abdominal symptoms. Operation resulted not only in relief of the gall-bladder disease, but apparently exerted a favorable influence on a glycosuria of several years' standing.

Although the pancreas is perhaps the most important gland in the human economy, we have little knowledge as to the early pathology of its diseases. It has been found that the gland is often involved in mumps and typhoid fever, and perhaps this may be the case in many other of the acute infections, including catarrhal jaundice. What relation, if any, such incidents bear to the later onset of diabetes we cannot tell, but it seems not improbable that when we do arrive at a clear understanding of the earlier phases of pancreatic disease, the problem of the causation of diabetes will be explained. As regards treatment, the case here cited would lend emphasis to what has already been written concerning prophylaxis by prevention of pancreatitis. It shows also the inefficiency of our present methods of handling such cases, and exposes the fallacy of depending on diet and drugs as curative measures.

1. Moynihan, B. G. A.: Pathology of the Living, W. B. Saunders Company, 1910, p. 33.
2. Robson, A. W. M.: Surgical Treatment of Certain Cases of Glycosuria, Brit. Med. Jour., April 23, 1910.

A NEW PRESERVATIVE FOR PICK-KAISERLING SPECIMENS*

JOSEPH MARSHALL FLINT, M.D., AND CARL KELLNER
NEW HAVEN, CONN.

In experimenting with a number of samples of oils for the purpose of preserving Kaiserling specimens, we have found an inexpensive and colorless neutral oil which can be used as a substitute for the unsatisfactory glycerin mixtures so much in vogue during the last few years. This product is known as Russian Mineral Oil No. 2. It can be obtained in barrel lots much below the market price of glycerin or glycerin and water, which is so frequently used. In testing the Pick-Kaiserling specimens preserved in glycerin which have lost their color to a greater or less extent, we have found that the reaction of the glycerin preserving fluid has become markedly acid. The advantages of the oil preservation seem to lie in the fact that there is a mechanical displacement of the heavier glycerin by the oil, which, owing to its neutrality and greater stability, does not decolorize the specimen by permitting the reduction of the blood pigment following a change in the reaction of the medium. Moreover, the clarity of the oil, while not greater than pure glycerin, is about the same, but does not become opaque or cloudy on standing.

* From the Surgical Laboratory of Yale University.

The series of steps for the mounting of specimens which has given us the best results is as follows:

Solution 1—
Carlsbad salts ..... 5 gm.
Liquor formaldehydi 40 per cent. dilution..... 5 c.c.
Water ..... 95 c.c.

The length of time that the specimen remains in the fluid depends naturally on its nature and size. We have allowed specimens to fix for varying periods from eighteen hours to seven days, with good results.

Solution 2—
Alcohol ..... 80 per cent.

As a rule a few hours is sufficient in this solution. Prolonged treatment with alcohol decolorizes the specimen.

Solution 3—
Glycerin ..... 50 c.c.
Water ..... 50 c.c.

In placing soft or elastic specimens directly from Solution 1 or from alcohol into pure glycerin, we have noticed a tendency for them to shrink and become distorted. If the dehydration is made more gradual after controlling the color restoration in alcohol the specimens tend to retain their form and original size with a minimum of shrinkage.

Solution 4—
Glycerin ..... 100 per cent.

Specimens are allowed to remain in this bath until they sink, which indicates that the impregnation with glycerin is complete, after which they are ready for transfer to the final preserving oil.

Solution 5—
Russian Mineral Oil No. 2.

The displacement of the glycerin does not take long, but varies with the size of the specimen. The glycerin falls to the bottom of the jar, from which it can be pipetted off, or else the impregnation may take place in a stock jar and the specimen transferred to the permanent museum jar after the oil has replaced the glycerin.

In the preservation of our pathologic surgical specimens we have found that cysts can be fixed with the maintenance of their original form if they are aspirated and filled with the solutions as they are transferred. This is particularly true of thin-walled cysts, making this step particularly important in the transfer into the final preserving oil.

While we have not been able to restore the color to old specimens that have turned brown, their condition has been much improved by the transfer from the glycerin preservative to the oil preservative. Experiments are now under way to determine the effect of the oil preservative on the histologic picture, but it must be obvious that where good histologic sections are desired pieces should be removed from the original specimen and preserved after fixation in suitable fluids.

321 Cedar Street.

A CASE OF TRUE HERMAPHRODISM

E. M. Prince, M.D., Birmingham, Ala.

Patient.—A girl, aged 18, came to my office for examination, stating that she had never menstruated and that she suffered a great deal with headaches which were supposed to be due to the above cause.

Her past history was negative as to illness, except measles and whooping-cough when a child. She had been a student and had returned home from college on account of the severe headaches which were worse about every twenty-eight days.

Examination.—Patient was a healthy-looking, robust girl, refined and very intelligent. Her color was good; there was a heavy growth of hair on the head. Her voice was soft and effeminate; breasts well-developed, rather larger than ordinarily seen in a girl of her age. Her hips were typically feminine; mons veneris scantily covered with hair; labia majora normal; no enlargement of clitoris; hymen unruptured. On rectal examination no mass or uterus could be felt. A vaginal examination was then made and the vagina found to be about 2 inches deep, terminating in a blind pouch. In the upper part of the labia majora two glands could be felt which were very freely movable, and could be pushed low down into the labia majora, or up into the canal of Nuck or inguinal canal. Her chest and blood were negative; urine contained some albumin.

A diagnosis of "no uterus" was made, with hernia of both ovaries, as she complained of the inconvenience incident to the abnormal location of the supposed ovaries. An operation was advised in which we proposed to replace these in the abdominal cavity and determine what abnormality existed.

Operation.—The abdomen was opened in the median line. The broad ligaments were seen to come together, forming a small mass which was about the size of a pecan. On the left side of this mass an ovary could be felt which was about normal in size. Lying near this ovary was what seemed to be an imperfectly formed tube. Nothing was removed from the abdominal cavity, as the family did not wish anything removed. There was no excuse for removing anything unless it was the supposed tube, which would have been interesting from a histologic standpoint. The abdomen was then closed. After much deliberation and consultation with the patient's mother we decided to remove the glands on either side of the labia majora. These were submitted to Dr. Dowman, whose report is below appended.

Pathologist's Report.—Microscopic examination of sections from the "tumors" removed from the labia of a young girl shows each to be a well-developed testicle with a rudimentary epididymis.

1127 South Twelfth Street.

SPONTANEOUS TYMPANOMASTOID EXENTERATION

Emil Amberg, M.D., Detroit

Mr. I. K. K. T., aged 38, gives the following history: The patient's left ear began to discharge, as nearly as he can remember, when he was about 7 years old. It received no treatment at that time so far as he knows. When he was about 14 years old he had in this ear a severe attack of earache that grew worse day by day. The mastoid appeared to be involved; there was considerable swelling behind the ear and the pain became general over the side of the head and face. The patient kept his head bent over toward the right shoulder. A local physician (in Texas) was consulted and he said an operation might be necessary, but hesitated to attempt it because of inexperience. The pain became almost unbearable until at the end of about ten or twelve days the pus burst through. The pain and swelling gradually subsided. A few weeks later a polyp was removed by this physician. He did not succeed in stopping the discharge. During the next four years the ear was treated off and on by several local physicians. Two or three more polyps were removed during that time. Occasionally the patient had severe pain. The hearing was practically destroyed so far as the right ear was concerned. The treatment consisted mostly in syringing the ear with a diluted antiseptic solution. Occasionally the boric acid treatment was tried. All forms were unsuccessful.

In 1892 the patient's physician recommended him to see a specialist in Dallas, who removed another polyp and in the course of about six months succeeded in getting the ear dry.

For the next four or five years he had no trouble at all, so far as he can remember. He thinks it was dry all that time. In Detroit, about twelve years ago, the discharge reappeared subsequent to a cold. A local specialist checked it after a few weeks' treatment. Probably once or twice a year the discharge would again occur, but always yielded rather promptly to treatment. The patient consulted me about six years ago. At no time in the last six years has there been a discharge for more than a very brief period. In the last three years there has been absolutely no discharge at all, says the patient. There never was any pain since it was treated twenty years ago.

The configuration of the destruction which we see in the patient's temporal bone corresponds practically to that created

by the surgeon during a tympanomastoid exenteration. The tympanum, aditus ad antrum, antrum and the remnants of mastoid process form one cavity. The facial ridge, the region of the horizontal semicircular canal, the medial, and posterior border of the antrum are plainly visible. The length of a line extending from the tragus backward and upward to the corner between the posterior and medial wall of the cavity is by actual measurement 1 7/16 inches.

The little inconvenience which the patient experiences, aside from his hardness of hearing (a fork is not heard by air conduction), and the comparative freedom from treatment is remarkable.

It is said that Politzer, when speaking of the temporal bone, expressed himself in the sense that death lurks on all sides of it save one. Nature has so far been very kind to my patient. It must be admitted that this unusual condition is so exceptional that it must be regarded as a curiosity and that it must not be cited in support of hesitancy concerning surgical interference in similar affections.

270 Woodward Avenue.

A CASE OF PELLAGRA IN NEW ENGLAND

DAVENPORT WHITE, M.D., NEW YORK

The following case of pellagra is the first case reported in Connecticut[1] and the second in the New England states.[2] It occurred in New Canaan, Conn., a town which is unusually healthy.

History.—Family history was negative save that one sister is a deaf-mute, from infancy.

The personal history is negative throughout. Patient was always considered the perfection of health.

Maize or cereals in any form were never eaten; white bread alone was her only food derived from grain. She was passionately fond of all tropical fruits. Her entire life was spent in New Canaan, and she never left it save for an outing of a day, and then within a radius of eight miles.

Menstruation began at 13 years; regular in all respects up to 15 years of age, then irregular in amount and periods for nine months, when it stopped completely. Her moral standard was above reproach.

In the spring of 1907, the patient, then a girl of 15, while attending the local school, began to suffer with lassitude, anorexia, and loss of weight. Soon there appeared a bright-red edematous condition on the backs of both hands and wrists; a few scattered vesicles were present, and a burning itching sensation was noted. No gastro-intestinal disturbance or fever symptoms.

The patient imagined herself to have been poisoned with "three-leaf ivy" *(Rhus toxicodendron)* or perhaps sunburned, and thought no more of it after the swelling had subsided and the parts had scaled. Her condition improved somewhat as summer progressed, although she lost her brilliant coloring and had not regained her normal weight of 120 pounds or her strength when she returned to school in the fall. Then her attention was called to her hands because of their dirty brown, thickened appearance, particularly noticeable on wrists and knuckles. As colder weather came these parts would often crack and bleed. There was a steady loss in weight, an ever-increasing weakness in the lower extremities, and her color faded to a pallid hue.

Finally, in the spring of 1909, she stopped school because of nervousness and physical weakness. Her disposition, from a bright cheery one, had become morose and sullen, and she spent much of her time alone. As time progressed she sank deeper into this melancholic state, and was more and more difficult to arouse. She would fly into a rage without the slightest provocation.

About the middle of June, 1911, she suddenly developed persecutory delusions and became so violent that she was removed to a hospital. After being restrained for ten days the acute mania was superseded by a low-muttering melancholic condition. Food and medicine were refused and water alone was taken. Soon alternating attacks of diarrhea and constipation developed, which on her removal home had become continuous diarrhea; stools from six to eight daily, frothy fluid, foul-smelling, with a small amount of mucus, was the general rule. She was incontinent of urine and feces at night, and had developed a bed sore some 2½ inches in diameter.

She now complained of indefinite cramp-like pains in the abdomen, and soreness (to touch) of leg and thigh muscles. Her sleepless nights were partially relieved, but she still complained of auditory delusions when I first saw her on July 20, 1911. She could be easily aroused, talked sensibly for a short time, only to relapse into a sullen apathetic state. Repeated calling for water and indigestible fruits formed her only voluntary conversation.

Examination.—The patient was a girl, aged 19, of moderate frame, emaciated, hunched up with knees flexed on abdomen; facies, dull and apathetic; a well-marked acne vulgaris on face; saliva drooling from mouth, and a dull-gray leaden hue to complexion.

Eyes: Normal, save for beefy-red appearance of mucous membranes.

Ears: Both drum-membranes slightly thickened.

Mouth: Tongue clean, swollen with tooth indentations, slightly dry on dorsum, but having a peculiarly velvety feel. It was bright-red in color, as also the gums, roof and sides of mouth, and pharynx. The gums showed a moderate Riggs' disease.

Heart: Somewhat rapid (112); sounds clear, but having a valvular quality. No murmurs, accentuations, or enlargement.

Lungs: Negative.

Abdomen: Symmetrical, slightly distended, no rose spots; tympanitic into flanks; no localized points of tenderness, although somewhat generally tender on deep palpation. No masses and no rigidity.

Liver: Dull in fourth, flat in sixth; does not percuss large; edge not felt.

Spleen: Does not percuss large; edge not felt.

Kidneys: Lower poles just palpable; no tenderness.

Extremities: Lower: Flexed on abdomen; slightly tender on deep pressure over muscles; no contractures; Babinski, absent; ankle-clonus, absent; no discolorations or thickenings on dorsum of feet. Upper: Dorsal aspect of hands and wrists show a well-marked thickening, especially on knuckles and wrists. This is rough to the touch, of a dirty-brown color, and shows cracking, with slight serous exudation in places. No evident muscle-tenderness.

Glands: Negative throughout.

Vertebral Column: No points of tenderness, no rigidity of neck.

Bed-sore: Two and one-half inches in diameter, over sacral region.

Romberg's Sign: Absent.

Vaginal Examination: No caruncules myrtiformes; mucous membrane, beefy-red; no exudation. One-finger examination showed cervix *not* lacerated; uterus, small and retroflexed; adnexa, negative.

Sensation: Pin-point pricks, scratching, blunt objects, heat and cold, were all recognized, but delayed.

Temperature, 99.2. Pulse, 112. Respiration, 22.

Course of Disease.—From July 31 to August 6 the patient's condition underwent a decided change for the better. This was accomplished through forced fluids, high rectal saline retained enemas, and increased sleep (through opiates). The mental condition became brighter, auditory delusions subsided completely, the frequency of movements dropped to two slightly formed stools daily, the appetite improved, the urinary output increased, the bed-sore healed completely, the abdominal pain and tenderness subsided, together with gas formation and fetid stools; and there was a decided gain in weight. Suddenly, however, on Aug. 6, 1911, nausea and a distaste for food developed and three days later vomiting began for the first time. With the nausea the stools became more frequent until they became almost continuous, also mucus in

1. So far as shown by a search of the Index Medicus.
2. The first was reported in Jour. Cutan. Dis., incl. Syph., 1910, xxviii, 42

fair amount. The patient became incontinent of urine and feces day and night. Two days prior to death a fibrillary twitching of tongue began, later involving in order hands, face, upper extremities, and finally the whole body. This increased in severity until these athetoid movements became so marked as to amount to almost clonic spasms. The abdominal pain returned, but not so the pain in lower extremities.

Death came from physical exhaustion on Aug. 9, 1911. The mind remained absolutely unclouded. There were no convulsions, the patient sinking into a quiet sleep with all spasms of muscles allayed, and death came one hour later. The temperature gradually rose to 106 F., pulse 180, and respiration 40. There were no paralyses or contractures.

Urine (catheterized specimen, Aug. 5, 1911): Clear, amber, 1016; albumin, none; sugar, none; indican, moderate amount; microscopic showed a few desq. sq. ep. cells, many amorphous urates, few leukocytes, no casts.

Blood Examination (Aug. 5, 1911): White blood cells, 9,400; red blood cells, 4,200,000; hemoglobin (Fleischl) 65 per cent. Differential; white blood cells, polymorphonuclears, 56.2 per cent. Large lymphocytes, 26.2 per cent. Small lymphocytes, 7 per cent. Large mononuclears, 1.4 per cent. Small mononuclears, 6 per cent. Eosinophils, 4.4 per cent. No malarial organisms, no nucleated red blood cells. Red blood-cells showed a well-marked secondary anemia.

Feces (Aug. 5, 1911): No ova of any kind; a trace of blood; no amebas.

No sputum at any time.

CONCLUSIONS

1. By a series of elimination pellagra seems to be the only diagnosis possible.

2. Marked improvement consequent to the eliminative treatment would point toward a condition gastro-intestinal in type.

3. The maize theory here would be exploded, with the possibility of infection through tropical fruits.

In closing I wish to thank Dr. James A. Miller of New York for his kind help.

447 West Fifty-Ninth Street.

OXALIC ACID POISONING

O. H. BROWN, M.D., ST. LOUIS
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AND W. G. SCOTT, M.D., ST. LOUIS
Intern, St. Louis City Hospital

The following report is presented as a basis for a discussion of a point in oxalic acid poisoning that we have not been able to find mentioned in the literature.

History.—J. R., a white man, aged 32, entered the hospital at 4 p. m., Aug. 24, 1911, and stated that about one and one-half hours previously he had taken, with suicidal intent, one ounce of a solution of oxalic acid intended for cleaning straw hats which he had purchased for 5 cents. The patient was well oriented as to time and place, had no hallucinations or delirium and appeared entirely rational in both speech and action. He admitted having been despondent for the past week and thought that he must have been temporarily insane when he took the acid.

Treatment and Result.—Thorough stomach lavage was accomplished and 100 c.c. of a saturated solution of magnesium sulphate were administered and this was followed by 90 c.c. of olive oil. The patient was then transferred to the ward. He was somewhat asthenic and rather somnolent. Pulse was 78; respiration, 24; temperature, by mouth, 96 F. The skin was cool, especially that of the hands and feet. The patient had slight pain in the abdomen but did not complain thereof; the abdomen was not tender to pressure. He took water freely. During the afternoon he vomited 6 ounces of sanguinous material. The bowels moved freely. In general, the patient's condition improved during the afternoon and at 5:50, nearly two hours after admission, his pulse was 88; respiration 24, and rectal temperature 98.2 F. At this time emergency treatment was discontinued, the prognosis was considered good and the patient was transferred to the regular ward for attention. His condition continued good until 9 o'clock when it was noticed that he was restless. At 9:30 his pulse was 100; respiration 24; at 11:20 pulse was 136; respiration 36, and temperature was 99.4 per rectum. From this time on, notwithstanding the use of digitalis and camphorated oil, the patient's condition gradually grew worse, except for a few hours after active stimulation began, at which time he responded slightly to the drugs. The patient died about thirty hours after swallowing the poison.

Remarks.—In discussing oxalic acid poisoning, Brundage says in his "Manual of Toxicology" that "death has occurred in from three to ten minutes but usually occurs in about an hour. Death has occurred as late as the fourteenth day."

Dwight and Pedersen in their "Toxicology," after detailing the symptoms of oxalic poisoning (without mentioning, however, the danger of venturing a good prognosis), rather suggestively state that there are none among the irritant poisons whose symptoms vary so much as those of oxalic acid. Eleven standard works on toxicology, and pharmacology were inspected. No reference was found to the dangers of apparently good prognoses in those cases that are not early fatal.

Cushny says in his text-book on pharmacology: "In mammals there is first, apparently, a stimulation of the medullary centers—the arterial tension is first increased through stimulation of the vasomotor center. Later, the movements are wanting in coordination, the respiration becomes slow and dyspneic, the heart is weak, and the animal becomes comatose and dies, sometimes in convulsions. . . . In cases of oxalic acid poisoning in man, the early symptoms are great muscular weakness, twitching of muscles, especially those of the face, more rarely convulsions; later there follows collapse, with a weak, fluttering pulse, pallor or cyanosis, coma and death."

That treatment of these cases may be efficacious is shown by a case reported by Dr. F. J. L. Hart,[1] A boy 15 years of age took 12 drams of oxalic acid. Severe symptoms came on promptly. Stomach-washing and hypodermic injection of apomorphin were used; there were also used brandy, digitalis and strychnin. The patient made a good recovery.

The solubility of oxalic acid is 1 part to 15.5 parts at 50 F. In this particular case then, if our facts were correct, the man had taken in the neighborhood of 35 grains of oxalic acid.

The lesson to be learned from the case herein reported is plain and is that even in the face of an apparently good prognosis, active emergency treatment should not be discontinued early when one is dealing with oxalic acid poisoning. At any rate, we feel that had active treatment been continued a few hours longer in this particular case, a life might have been saved. The treatment of the next case of oxalic acid poisoning should be improved and would consist of the following points: (1) stomach lavage, (2) free elimination of the bowels with magnesium sulphate, (3) drinking copiously of water, (4) calcium lactate by stomach, (5) calcium lactate intravenously, (6) the use of digitalis and strychnin or other heart tonics to preserve the proper blood-pressure.

A TREATMENT OF GASTRIC ULCER

C. S. MINNICH, M.D., PALMER, NEB.

In the treatment of gastric ulcer I have long taken advantage of the reversal of the fact that the ulcer is caused by the corrosive action of the gastric juice on the gastric mucosa.

All will agree that the gastric juice is made up of the secretion of the peptic glands and hydrochloric acid and we know that neither of these will act as a digestant without the other. We cannot stop the secretion of either one of these constituents of the gastric juice but we can stop the action of both of them by neutralizing the hydrochloric

1. Hart, F. J. L.: Lancet, London, Oct. 1, 1898.

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acid. I believe that if this is done a gastric ulcer will usually heal quickly and kindly. I refer to good-sized and repeated doses of chalk, enough to neutralize the hydrochloric acid and keep it neutralized all the time during treatment.

The treatment of gastric ulcer with alkalies is not new, but I believe that such treatment has not been properly applied and that the alkali has not been properly chosen or properly used. Soluble alkalies will not answer, as they are at once washed away into the bowel. Chalk, of course, is not an alkali but acts as such in the presence of hydrochloric acid. I apply this line of treatment in acute cases as my experience with chronic cases has been limited.

The treatment may begin as soon as the diagnosis is made, except in the face of hemorrhage or some other very evident contra-indication. Little or no restriction in diet has been found necessary except that the food be finely chewed or minced, or taken in the form of soup, which I prefer, so that the food can easily enter the bowel from the stomach where it meets the alkaline intestinal juices. Small meals oftener taken do not seem to do as well as the three-times-a-day feeding, as the stomach appears to need a period of rest aside from the action of the chalk treatment.

This treatment cuts out the stomach as a digestive organ for the time being and the work of digestion is thrown on the intestines, which seem entirely equal to the occasion even with a practically unrestricted diet.

No untoward effect seems to be caused by the treatment, no "dyspepsia" nor weight is felt more than would be accounted for by the ulcer. It seems that the ulcer is not much irritated by the neutral stomach contents and seems to heal quickly under this neutral reaction of the stomach juices. It is the active, biting gastric juice that causes the pain and prevents the healing as well as having caused the ulcer in the first place.

A dose of 4 or 5 gm. should be given in a little water during meals and repeated for about two doses an hour or two apart after eating. An excess does not seem to cause any trouble. The idea is to stop the action of the gastric juice entirely by neutralizing the acid so that the ulcer can have a chance to heal. I use precipitated chalk but see no reason why the prepared chalk would not answer as well or better.

MALFORMATION OF FEMALE GENITALS

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Summary of Condition.—Double uterus (didelphys) and double vagina (vagina septa) with left hematocolpos, hematometra, hematosalpinx, and hematocyst of ovary due to atresia vaginæ lateralis with consequent damming back of menstral flow.

Patient.—H. C., aged 15, Hospital No. 790, was admitted Sept. 21, 1910, in the service of Dr. Hugh H. Trout, being referred by Dr. A. L. Wolfe, the tentative diagnosis of stenosis of os having been made. On account of the patient's age, no pelvic examination had been made. There was complaint of severe dysmenorrhea. Family history was unimportant. The patient had always been a healthy girl, never had any serious illness. About two years before admittance she began having a good deal of pain during the acts of defecation and micturition; the bowels were constipated. The present illness began five months previously. Patient had one normal menstrual period prior to this, a rather free flow with but slight inconvenience; at this time, however, she had a second period, which was accompanied by a good deal of pain but scanty flow. Since then periods had been regular, every four weeks; each succeeding period, however, had been associated with more and more pain, until the last one which was associated with agonizing pain, requiring ½ gr. morphin hypodermatically for relief. Flow had been scanty since the first period; color bright red. Painful defecation had continued since onset two years ago. There had been some frequency of micturition during the past five months. Appetite had been poor during past two or three months; digestion unimpaired. Patient thought that she had lost some weight.

Physical Examination.—Patient was sparely nourished; color fair (hemoglobin 65 per cent.), temperature 101, pulse 124. In lower left portion of abdomen an indefinite mass could be felt, and patient complained of tenderness and pain on palpation of lower abdomen, especially in left iliac region. Pelvic examination made under an anesthetic on the operating table showed normal vaginal outlet, hymen intact, vagina straight tube, no "H" shape. When the finger was introduced into the vagina, a large mass was felt on the left side, and extending down to the left labia. Cervix could not be located. Bimanually a large mass filling entire left side of the pelvis was made out. It was decided to do an exploratory laparotomy.

Operation.—There was found a large left ovarian cyst, about 10 cm. in diameter, and filled with blood, and a bicornute uterus, the left horn being the larger, about 8 cm. in longest diameter. The right horn was rudimentary, about 3 cm. in longest diameter. Below the left horn, and continuous with it was a large mass 8 or 10 cm. in longest diameter. In the attempt to dissect this mass free it was ruptured, allowing about a liter of retained menstrual flow to escape. The entire mass with uterus, tubes and ovaries was removed because it was found impossible to establish a permanent opening for menstrual flow.

Specimen.—Examination of the removed specimen showed a double uterus with light coalition between the two cervices and the two vaginas. The right tube and ovary were normal.

On opening the right uterus the cervix was 3½ cm. long, the vaginal portion not so prominent as normally, there being a sudden thickening in the region of the cervix (uterus parvicollis) instead of the usual protrusion of the cervix into the vagina. The uterus was small, its cavity being the same length as the cervix. Endometrium appeared normal.

On the left side the uterus, cervix and vagina presented something of a dumb-bell appearance, though, of course, not so dilated since rupture and escape of contents. On opening this side the vagina presented a thick wall, 0.5 to 1 cm., was considerably dilated, and had no traces of rugæ. As on the right side, the change from vagina to cervix consisted merely in a gradual thickening of the wall. Septum between vaginas was from 5 to 7 mm. in thickness.

In this then we have a case in which each Müllerian duct formed a tube, uterus and vagina, coalition consisting in a mere union of the walls of the two vaginas and cervices, there being no evidences of even a thinning of the septum at any place.

Course.—Convalescence was marred by a vesicovaginal fistula as a result probably of dissecting free the left vagina. November 6, three weeks after her discharge, the patient returned to the hospital for closure of the fistula, which was done a few days later. It is (March 21, 1912) eighteen months since first operation and patient is enjoying the best of health.

RUPTURED TUBAL PREGNANCY WITH OPERATION

BERNARD L. WYATT, M.D., AND KOSSIE L. BUCKNER, M.D.
BRIDGEPORT, TEXAS

History.—Patient, A. B. B., aged 32, married; family history negative; previous personal history of no importance with reference to her present condition.

Menstruation began at the age of 16, was always regular, although somewhat painful, and the periods were from five to six days in duration. There was no history of gonorrhea. The patient is the mother of two children, aged 9 years and 19 months, respectively. Both labors were normal. There was no history of miscarriage or abortion. The bowels had always been regular and general health good.

Present Illness.—Dec. 14, 1911, the patient began menstruating, and the flow continued for two or three days. The men-

strual period being expected at this time, no suspicion of any trouble was entertained. The flow, however, returned in three or four days, lasted a day or two, and then disappeared. This metrorrhagia recurred at varying intervals until Jan. 9, 1912. On the afternoon of January 9, while in bed, the patient was suddenly seized with a severe agonizing pain over the hypogastric and left iliac regions. The pain came on without any premonitory symptoms and was excruciating in character. There was at the same time a severe hemorrhage from the uterus, and within a few minutes the patient was in a state of collapse and the family physician was summoned. The patient made a good recovery, but from this date until February 4, when she came under our observation, she suffered from colicky pains in the lower portion of the abdomen, ran a daily temperature which would reach 100 F. to 101 F. in the afternoon, and had some discomfort on evacuating the bowels. Also a mass was noticed on the left side. During all this time the patient regularly performed a large part of her household duties, and in coming to the sanatorium was obliged to travel nearly 200 miles.

Physical Examination.—The physical examination was negative except in so far as the pelvic organs were concerned. Both vagino-abdominal and recto-abdominal examination revealed considerable enlargement of the left tube, and a large mass in the culdesac of Douglas. There was extreme sensitiveness of all the pelvic organs, which made the examination somewhat difficult.

Operation.—The patient was given 2 ounces of castor oil and prepared for an abdominal section, which was performed on the morning of February 6. On opening the abdomen a greatly enlarged fallopian tube was found which showed an ampullar pregnancy of about ten weeks' duration. The posterior layer of the broad ligament was greatly distended by the hemorrhage, which had occurred between the layers of this structure, and there were extensive adhesions between the gestational sac and the rectum. Salpingo-oöphorectomy was performed, two handfuls of blood-clots removed, and after an examination of the right tube and ovary, which were found to be normal, the abdomen was closed. On account of the great amount of oozing, a glass drainage-tube, surrounded by iodoform gauze, was introduced, the gauze being removed on the third day, and the tube on the fourth day after the operation. The convalescence of our patient was uneventful, and she was discharged from the sanatorium at the end of eighteen days.

REPORT OF CASE OF DERMATOBIA NOXIALIS IN MAN

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Demonstrator of Surgery, University of Texas

History.—O. S., German, aged 24, a laborer, came from Mexico to Galveston three weeks before the time of examination. He had lived in Mexico for six months previously and during this time had had little work to do and lived as a tramp, sleeping out of doors. He said that the flies were very bad, and that many times he was bitten by them; while bathing in a stream he was bitten on the end of the penis a little over a month prior to his visit. A little blood exuded from the bite and swelling soon followed. Since that time there had been a slight swelling of the dorsum of the penis, just behind the corona of the glans. A small scab would form over the bite and then come off, with a brown fluid exuding. This was repeated at frequent intervals. He had suffered continuous pain in the part.

Examination.—There was a slight abrasion just in front of the corona of the glans on the dorsal surface of the penis, and on pressure a drop of pus was expressed. Just behind the glans was a hard swelling about the size of a pecan, which felt very much like scar tissue. A sound was passed into the urethra, showing it to be free from the tumor mass. The penis was dressed and the patient requested to return the following day, but did not for two days. Then there was found only a little inflammation about the parts and no pus coming from the opening, but the swelling remained the same. On pressure a white gelatinous-appearing body showed in the opening of the sinus. With a pair of skin forceps this was grasped, and with traction the body elongated and was pulled through the small opening.

Diagnosis.—It was readily seen to be a larva of some fly, alive and actively moving. It was ¾ inch in length, club-shaped, and slender posteriorly. Its body was in segments with rows of black hairy bristles or spines on the borders of the upper segments encircling the body. It was glistening white in color, and had two hooked mandibles and anal breathing pores. The larva was placed on fresh beef and at the end of ten hours was active and alive, but at the end of twenty-four hours was dead, showing that it must have living tissue in which to thrive. It was evidently the larva of *Dermatobia noxialis*, known as the "macow worm" (*ver macaque*, monkey worm). It is of the family *Oestridæ* (warble flies) which are found from Brazil to Mexico, and as described in Daniel's "Laboratory Studies in Tropical Medicine," is "of large size, thick set, and often very hairy. The larvæ live under the skin of men, apes, cattle, and dogs as a rule."

PROSTATIC CARCINOMA IN A YOUTH

S. J. GARDNER, M.D. AND W. T. CUMMINS, M.D.
SAN FRANCISCO

Patient.—L. P. R., aged 17, American, machinist apprentice, was admitted Oct. 2, 1911. Family history negative. Previous history: no recorded illness except diphtheria when 8 years old. The present illness began about seven weeks before admittance, with colicky pains in lower left side of abdomen accompanied by vomiting. Pains radiated to left testicle. There was incontinence of urine affected by posture; no hematuria. After four weeks the pain shifted to right side of lower abdomen and radiated to right testicle. The patient lost much weight.

Examination.—Well-nourished, fairly well-developed young man. Pulse and respiration normal. Eyes normal. No eruption. Tongue clean. Heart and lungs negative. Rectal examination bimanually showed hard, lobulated enlargement of the prostate, which was particularly painful on palpation. Urinalysis: Clear; specific gravity 1018; acid; no sugar nor albumin; no casts (on admission).

Clinical Diagnosis.—Sarcoma of the prostate. Death occurred Jan. 12, 1912.

Post-Mortem Record.—Markedly emaciated body. Lividity and rigidity moderate. No eruption, scars, or bed-sores. Peritoneum smooth, moist, glistening and no increase of fluid. Position of abdominal organs normal. A large, firm, pale, nodulated mass completely filling pelvis. Spleen somewhat increased in size but of normal shape; capsule stripped with some difficulty. Markings of fibrosis on cut surface. Color brownish-red. No evidences of tumor metastasis. Liver of normal size and shape, showing typical "nut-meg" markings. No evidences of tumor metastasis. Gall-bladder, stomach, intestines and pancreas normal. Both kidneys somewhat larger than normal. Capsules strip easily. Color brownish-red. Considerable dilatation of calyces as well as pelves. Both ureters dilated throughout their continuity to size of lead-pencil. Both adrenals soft, yellow and cystic.

The bladder was moderately dilated and contained approximately 200 c.c. of urine. Its wall was considerably thickened and varied between 0.5 and 1 cm. The mucous membrane was moderately congested, thickened and rugose, but presented no evidence of ulceration. In the prostatic region there lay a firm, pale, nodular mass which had exerted considerable pressure on the rectum, as dilatation was seen above the area of stenosis. This mass included the neck of the bladder and as far back as the openings of the ureters. Two small masses projected into the bladder. On sectioning these masses were firm and pale with whorls and bands of tissue apparently of connective-tissue type. There were no evidences of congestion nor hemorrhage. The prostatic urethra was stenosed and the mucous membrane of this as well as the membranous portion was moderately congested.

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Mesenteric nodes were enlarged, firm and pale, their average size being about that of a soup bean. The retroperitoneal group were enlarged to the size of chestnuts with the same general consistency and appearance as the mesenteric group. Near the splenic flexure of the colon there was a pedunculated lymph-node somewhat larger than a horse-chestnut (6 by 5 by 4 cm.). Its tissues were identical in appearance with the other nodes. Though very pale, this was at first mistaken for an accessory spleen.

Permission for a partial autopsy only was granted so that an examination of the thoracic organs and central nervous system could not be made.

Histologic Examination.—Spleen: Capsule and trabeculæ showed moderate fibrosis. Sinuses in places were considerably dilated. Large quantities of hemosiderin were seen. Liver: There was no abnormality except for a moderate passive congestion and hemosiderosis of parenchyma near the midlobular areas. Kidneys: Capsule was moderately fibrosed. Much of the cortical epithelium showed degenerative and necrotic changes. In some of the tubules the epithelium had desquamated. There were numerous areas of connective tissue overgrowth. Adrenals: There was marked vacuolation of the cells of the fascicular and reticular zones. Pancreas: A moderate fibrosis was evident. Prostate: There was considerable overgrowth of connective tissue. The epithelium of many alveoli showed marked proliferation and penetration of the basement membrane. In some places evidences of alveoli were seen but in many other places the epithelial masses were solidly formed. Retroperitoneal lymph-nodes: All of these were of the same general structure. The connective tissue showed some overgrowth and between these trabeculæ there were large and small masses of cells with vesicular nuclei resembling closely the above-mentioned alveolar epithelium of the prostate.

Pathologic Diagnosis.—Carcinoma of the prostate and retroperitoneal lymph-nodes; chronic interstitial splenitis and hemosiderosis; passive congestion of the liver; chronic parenchymatous nephritis; hydronephrosis and hydro-ureter; chronic interstitial pancreatitis.

RELATION OF VARIETIES OF STREPTOCOCCI

WITH ESPECIAL REFERENCE TO EXPERIMENTAL ARTHRITIS *

DAVID J. DAVIS, M.D.

CHICAGO

It is the purpose of this statement to call attention to certain facts observed in connection with a series of animal experiments on the relation of various kinds of streptococci to experimental arthritis. Injection of *Streptococcus hæmolyticus* intravenously into rabbits practically always gives rise to arthritis and tenosynovitis which may be monoarticular or polyarticular. This is true regardless of the source of the organism as I have shown in a previous paper.[1] When given in moderate doses rarely do the streptococci localize elsewhere. In large doses they are prone to produce myocardial abscesses and hemorrhages and occasionally also typical vegetative endocarditis. The latter lesion, however, is not common, probably because sufficiently large doses cannot be given without quickly killing the animal by general septicemia.

A streptococcus recently isolated from cases during an epidemic of sore throat in Chicago,[2] has been tested on animals and in every instance (four strains used) arthritis was produced. In one animal a vegetative endocarditis of the aortic valve resulted. Through the kindness of Dr. Fabyan of Boston I received four strains of streptococci isolated during the Boston epidemic of sore throat a year ago. Two of these strains have been injected into rabbits and both, in moderate doses, produced multiple arthritis. The other strains have not yet been tested. These cocci appear to be identical with the Chicago streptococci mentioned.

Six strains of typical *Streptococcus mucosus* were injected intravenously into rabbits. Without exception all localized in or about joints producing multiple arthritis. Acute pericarditis and peritonitis occurred in some instances. These organisms are highly virulent especially when first isolated and minute doses should be given; otherwise the animal is quickly overwhelmed with the infection and dies in twenty-four to forty-eight hours without definite localization of the organisms.

Streptococcus viridans is often encountered about the throat and occasionally in the tonsils especially in certain cases of endocarditis.[1,2] These organisms, in contrast with the three types above mentioned, rarely produce arthritis even in very large doses. On the other hand, they tend to localize in the heart valves, giving rise to endocarditis. These organisms have been found

TABLE OF THE RELATIONS OF THE ORGANISMS

No.	Organism.	Hemolysis on Blood Agar.	Green Colonies on Blood Agar.	Capsule.	Experimental Arthritis	Experimental Endocarditis.
1	*Streptococcus hæmolyticus.*	+++	0	0	+++	±
2	*Streptococcus epidemicus* *	++	0	+	+++	±
3	*Streptococcus mucosus....*	±	++	+++	++	±
4	*Streptococcus pneumoniæ (pneumococcus)*	0	+++	+	±	+?
5	*Streptococcus Viridans....*	0	+++	0	±	+++

* This streptococcus is the organism which caused the recent epidemic in Chicago, and apparently also in Baltimore and Boston.

by Rosenow[3] in the blood and lesions in many cases of chronic infective endocarditis. He finds that they almost never localize in the joints of animals; on the other hand endocarditis is readily produced. The *Streptococcus viridans* would therefore appear to be rather sharply differentiated from other streptococci in this respect. From the above facts the suggestion is made that the occurrence of arthritis on animal inoculation may be of value in differentiating varieties of the streptopneumococcus group.

This leads one to a consideration of the classification of organisms of this group. This may perhaps best be presented in the accompanying table which is designed to bring out certain relations, but is not intended to be a complete classification. Nos. 1, 2, and 3 may be considered as belonging to the streptococcus group; Nos. 4 and 5 to the pneumococcus group. It will be noted that the transition from one member to another is more or less gradual. No. 2, the organism causing the recent epidemic in Chicago, lies between the *Streptococcus hæmolyticus* and the *Streptococcus mucosus*, but apparently resembles the former more closely than the latter.

1416 Indiana Ave.

* From the Laboratory of St. Luke's Hospital.

1. Davis: Jour. Infect. Dis., 1912, x, 148.

2. Davis and Rosenow: An Epidemic of Sore Throat Due to a Peculiar Streptococcus, THE JOURNAL A. M. A., March 16, 1912, p. 773.

3. Rosenow: Jour. Infec. Dis., 1909, vi, 245.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

535 DEARBORN AVENUE . . . CHICAGO, ILL.

Cable Address . . . . "Medic, Chicago"

Subscription price . . . . . Five dollars per annum in advance

[*For other information see second page following reading matter*]

SATURDAY, APRIL 27, 1912

RACE DECAY AND SOCIAL HYGIENE

The cry about "race suicide" which is so frequently heard nowadays is taken by some to represent a serious sociologic problem demanding earnest consideration on the part of far-seeing nations. There can be no doubt that a fall in the birth-rate has been spreading in Europe for several decades; but the question arises whether the undeniable statistical facts justify the alarmist statements and protests which have gone forth from time to time. Are the nations involved and the world at large threatened with dire consequences from the failure of certain classes to replenish the earth with successors of their own kind?

The propagandists assert that bad stocks are tending to replace good ones because the good stocks of the upper social class are decreasing in fertility, whereas the bad stocks of the lower social class are not. To this the reply has been made that "the soundness of a stock, and its aptitude for performing efficiently the functions of its own social sphere, cannot, indeed, be accurately measured by any tendency to rise into a higher social sphere. On the whole, from generation to generation, the men of good stock remain within their own social sphere, whether high or low, adequately performing their functions in that sphere. They remain, we may say, in that social stratum of which the specific gravity is best suited for their existence."[1]

Discussions of this sort are primarily of interest to the sociologist rather than to the physician. But they can be eliminated only with difficulty from the more distinctly biologic aspects of the talk about "race decay." The scientist must take a position toward this question, and the physician in particular is often expected to contribute an illuminating opinion on such topics. Shall he champion the cause of those whose motto is "increase and multiply," or shall he pause to examine the ideals of the modern study of eugenics which embraces those agencies by which the human race may be improved?

One answer to this is boldly formulated by Havelock Ellis, the well-known English writer on the psychology of sex. "A female salmon," he says, "it is estimated, lays about nine hundred eggs for every pound of her own weight, and she may weigh fifty pounds. The progeny of Shakespeare and Goethe, such as it was, disappeared in the very centuries in which these great men themselves died. At the present stage of civilization we are somewhat nearer to Shakespeare and Goethe than to the salmon. We must set our ideals toward a very different direction from that which commends itself to our salmonidian sciolists. . . . The vulgar aim of reckless racial fertility is no longer within our reach and no longer seems worthy to us. It is not consonant with the stage of civilization we are at the moment passing through. Ours is now the higher task of the regeneration of the race; or, if we wish to express that betterment less questionably (since the word regeneration implies that there has been degeneration — which cannot be positively affirmed), the *aggeneration* of the race."[2]

Obviously the betterment here advocated must center in part about the control of reproduction. This in itself is by no means the sole essential for social progress, since it does not necessarily involve any mode of improving the race by a direct selection of the stock. The limitation of offspring is often charged with being an egoistic measure; but Ellis insists that it is imperatively demanded in the altruistic interests of the individuals composing the race. "It may not improve what we abstractly term the race, but it immensely improves the individuals of which the race is made up. Thus the limitation of the family renders it possible to avoid the production of undesired children. That, in itself, is an immense social gain because it tends to abolish excessive infantile mortality. It means that adequate care will be expended on the children that are produced, and that no children will be produced unless the parents are in a position to provide for them. Even the mere spacing out of the children in a family, the larger interval between childbirths, is a very great advantage. The mother is no longer exhausted by perpetually bearing, suckling and tending babies, while the babies themselves are, on the average, of better quality."

In the past the efforts to elevate mankind were largely fostered by various types of social reform which aimed to improve the conditions of life, to perfect our environment. The future calls for a program which will be directed toward the very sources of life. Our generation carries heavy and complicated social burdens which are inflicted on it in the form of an increasing dependent class typified in the feeble-minded. It is to be expected that this load can be raised by some movement to control life. This is work for the social hygiene of the future. Ellis remarks in this relation: "It would be clearly undesirable to breed men, as animals are bred, for single points at the sacrifice of other points, even if we were in a position to breed men from outside. Human breeding must proceed from impulses that arise voluntarily in human brains and wills and are carried out with a human sense of personal responsibility. The compulsory presentation of certificates of health and good breeding

1. Ellis, Havelock: The New Social Hygiene, Yale Review, 1912, i, 365.

2. Ellis, Havelock: Yale Review, 1912, i, 367.

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as a preliminary to marriage forms no part of eugenics, nor is compulsory sterilization a demand made by any reasonable eugenist. Certainly the custom of securing certificates of health and ability is excellent, not only as a preliminary to marriage but as a general custom. Certainly, also, there are cases in which sterilization is desirable, if voluntarily accepted. But neither certification nor sterilization should be compulsory; they only have their value if they are intelligent and deliberate, springing out of a widened and enlightened sense of personal responsibility to society and to the race. . . . We cannot indeed desire any compulsory elimination of the unfit or any centrally regulated breeding of the fit. Such notions are idle, and even the mere fact that unbalanced brains may air them abroad tends to impair the legitimate authority of eugenic ideals. The two measures which are now commonly put forward for the attainment of eugenic ends — health certificates as a preliminary to marriage, and the segregation or sterilization of the unfit — are excellent when wisely applied; but they become mischievous, if not ridiculous, in the hands of fanatics. . . . Domestic animals may be highly bred from outside, compulsorily; man can be bred upward only from within, through the medium of his conscience and intelligence and will, working together under the control of a high sense of responsibility."

A suggestion along this line is made by a New Zealand writer, A. N. Field.[3] He advocates, indeed, a compulsory medical examination as a preliminary to marriage, but, as its results are to be confidential, Ellis' objections would not, we imagine, extend to this form of "compulsory certification." As Field remarks, while it is easy to pick out a few extreme cases of degenerates on the one hand and of exceptionally sound and healthy young people on the other, no one is at present competent to divide the mass of possible candidates for marriage into the fit and the unfit. It would, however, have a good effect if men and women contemplating marriage were compelled, before taking that step, to consider seriously their fitness for parenthood. Private initiative, like that of the Chicago clergyman[4] who refuses to marry any couple not provided with medical certificates of health, might in time create a force of public opinion which would make disease a mark of social bad form—a thing to be ashamed of in oneself and certainly not to be tolerated in one's children. This may seem utopian; yet within a few generations social ideals have undergone greater transmutations than this would involve. One thing is certain: the creation of public sentiment may seem a slower method of racial improvement than the enactment of laws, but it is a far surer and more thorough one; and it avoids the dangers involved in hasty sweeping legislation based on crude generalizations from insufficient data.

3. Practical Eugenics—Medical Marriage Certificates, Eugenics Review, 1912, iii, 306; abstr. in THE JOURNAL A. M. A., April 13, 1912, p. 1129.

4. Health and Marriage, THE JOURNAL, A. M. A., April 6, 1912, p. 1019.

DR. WEIR MITCHELL'S NEW RESEARCHES ON HARVEY

In 1907, Dr. Weir Mitchell published a volume of interesting "Memoranda" on Harvey, dealing mainly with certain stray references to him in various memorials of the time, such as Harvey's autograph medical directions and prescriptions written in the "Commonplace Book" of Heneage Finch, afterwards Lord Chancellor of England, or the verse in Alexander Smith's satire on London physicians (*circa* 1611):

"What ho! Dr. Harvey, that are ranked among parvi,[1]
Are you still dissecting?"

— the whole concluding with a reprint of William Roberts' essay on the portraits of Harvey. The new volume of "Miscellanea," which Dr. Mitchell has just published (1912[2]), has a deeper biographical interest, containing, in effect, the substance of his interesting Harvey lecture of last year. The first part consists largely of certain hitherto unknown letters of Harvey recently published in a volume of state papers by the Royal Historical Manuscript Commission, of which Dr. Mitchell obtained advance proof copies, with permission to print, through the courtesy of Sir William Osler. These letters were written to Lord Feilding, English ambassador at Venice at the time of Harvey's travels through Germany and Italy (1636) as physician to Lord Arundel's suite (1636). The first two letters, written from Linz, contain interesting references to the effect of the Thirty Years' War on "that ruined desolat country of Germany," and indicate that Harvey could hold his own at need in a drinking bout. The real Harvey, however, comes out in the Italian letters, all but one written from Treviso, where, through some mischance, he was detained in quarantine (the plague was then rampant) for about forty days. The podesta of Treviso was not satisfied with the traveler's certificate of health (*fede di sanita*), and "honest little Hervey" (as Lord Arundel styles him) waxes very wroth at his unjust confinement in the Lazaretto. "Heare I am to lye for ought I see in the open base feilds, God knows how long. The Podesta refuseth to see or reade my passes, and I cannot cum att him to speake and use my reasons. I am afraid this lying in the feild will doe me hurt in my health. I beseech you Eccelency to lament hereof." This is the tenor of a remarkable series of testy epistles to the ambassador, importuning him to "procure with all expedition my freedom from this barbarous usadg." The last letter of the series, written from Florence, shows Harvey happily on his journey again and somewhat appeased by the many courtesies which he received at the court of the Grand Duke Ferdinand II, who was a patron of science and an inventor of thermometers. The Harvey of these letters is undoubtedly the Harvey of Aubrey's

1. "Parvi" refers to Harvey's short stature.

2. Some Recently Discovered Letters of William Harvey, with Other Miscellanea. By S. Weir Mitchell, M.D., LL.D., F.R.S. Transactions of the College of Physicians of Philadelphia. Paper. Pp. 59, 1912.

famous description, short, swarthy, raven-haired, choleric, nervously fingering the handle of his dagger, and reminds us of the old German proverb about the high courage of little people (*Kleine Leute haben grosse Herzen*). Dr. Mitchell notes the amusing effect of Harvey's hot temper on his spelling, the latter improving after he had regained his freedom, when his letters were not written at such white heat or in presto time.

Dr. Mitchell concludes his work with the following estimate of Harvey's genius and character.

"Intellectually he was in many ways remarkable, for even in the youth of his brilliant discovery, he had none of the abrupt conclusiveness of youth nor any of the raw haste of our own day. He must slowly and deliberately have invented and perfected methods of research which made him the fertile father of modern physiologic science.

"One may say of his moral qualities that he had two tempers. Concerning scientific differences and hostile comment on his discovery, he was charitable, magnanimous and well-mannered in his replies, a model for those men of science who bitterly resent opinions contrary to their own. In small every-day matters, he was probably, as Aubrey says, choleric. The letters in Italy reveal his impatience under what in his day was not a rare annoyance to travelers.

"That he attracted the love of his fellows and had warm friendships is plain, and that he was largely and thoughtfully generous is as clear. Of his politics we know enough. He was a royalist, and that he regretted the change of government he himself, or rather Ent, makes plain. Of his form of religion we learn little beyond the inference from Lord Arundel's jest, that he was known as a Protestant. He could not, I presume, have been elected warden of Merton College unless he had been of the Church of England. That he was a reverently religious man is written in many a page of his works — surely, taking him for all in all, a noble-minded model of what is best in the physician and the gentleman."

We congratulate Dr. Mitchell on the production of a work which should be read by every admirer of Harvey and which will undoubtedly become a standard source of reference for future biographers of the greatest physiologist of his time.

PROPOSED AMENDMENTS TO THE IMMIGRATION LAW

Mention has been made in a previous issue[1] of the relation obtaining between mental defectives and immigration, and also of a certain legal decision[2] which prevents the deportation of a fairly large class of insane aliens. The New York State Board of Alienists has given much study to the problem of remedying the admitted defects of the present law and now recommends certain amendments to the immigration act of Feb. 20, 1907, which it feels are practicable and would go far toward relieving the existing conditions.

The first of these recommendations is to the effect that it should be unlawful for any transportation company to bring insane persons into the United States. This adds the insane to the list of persons (idiots, imbeciles, epileptics, and those afflicted with a loathsome or dangerous contagious disease), whose exclusion is mandatory, and for bringing whom the transportation company is fined $100. This is in accordance with the idea of Mr. Williams, Commissioner of Immigration for the Port of New York, who believes that bringing excludable aliens into the United States should be made to inflict the greatest possible financial loss on the steamship companies.

Another provision is for the employment of qualified alienists connected with the Public Health and Marine-Hospital Service at all large ports of entry, these alienists to be men who have had special training in the diagnosis of mental diseases, and to be directly responsible for the mental examination. As conducted at present, the mental examination is not considered a special part of the general examination, and no effort is made to have it conducted by officers specially trained for the work. The Board of Alienists rightly considers this the most important of its recommendations.

Another amendment suggested is that aliens who have entered this country in violation of law, or who have become public charges from causes existing prior to landing, can be deported within five, instead of three years as at present. This change would afford each state more protection against the unlawful entry of aliens.

Any measure which leaves any discretion to the steamship companies, or which trusts to their humanity or consideration for the helpless and incompetent in the steerage, will leave the way open for serious abuses in the case of the insane. Hence it is recommended that when the mental and physical condition of a deportable alien is such as to require personal attention and care, a suitable person shall be employed at government expense, to accompany the alien to his final destination.

The last provision is for a new section making it a misdemeanor for a steamship company to refuse passage to any alien from a public institution, provided that the alien was originally brought in by that company, that it is certified by the proper medical officer that the alien can travel without danger to himself or others, that if necessary there shall be a suitable attendant, and that no part of the expense shall fall on the steamship company. Cases to which this amendment is applicable are those of such persons as desire to return to their own country and friends, but cannot, because the steamship company refuses them passage. Two hundred and four such patients were returned last year by New York State, and two hundred and thirty-five others at the expense of friends, but many more were arbitrarily refused passage

1. Mental Disorders and Immigration, The Journal A. M. A., March 30, 1912, p. 938.
2. A Legal Decision on a Medical Question, The Journal A. M. A., March 23, 1912, p. 861.

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The situation is that insane and mentally defective aliens are allowed to come to this country freely by the steamship companies, but only those aliens are accepted for return who are in good physical and mental condition. This works great injustice to the aliens concerned, as well as a grievous wrong to this country.

In spite of the interests which would undoubtedly be arrayed against them, these proposed amendments should be enacted into law. They originate from a group of expert students of the problem, and would be practical and efficient in operation.

CUTANEOUS REACTIONS IN SYPHILIS AND GONORRHEA

Noguchi, whose successful cultivation of the *Spirochæta pallida* has attracted much attention, called attention in our last week's issue[1] to the intradermic test for syphilis of which he published a preliminary account some time ago.[2] It is analogous in every way to the von Pirquet reaction for tuberculosis. The antigen, which Noguchi calls "luetin," is prepared by grinding the culture containing large numbers of spirochetes in an agate mortar, diluting the residue to a fixed strength, killing the organism by heat, then adding 5 per cent. phenol. After testing for sterility by animal inoculation, this "luetin" is injected intradermally in the surface of the arm, in doses of 0.05 c.c. As a control an uninfected culture medium prepared in the same way is injected in the skin of the other arm. The positive reaction, which is obtainable only in syphilis, begins as a small erythematous area surrounding the point of injection, usually within twenty-four hours. This area may remain without further change for several days or may become papular or pustular according to the severity of the reaction, which reaches its height in four or five days, and usually subsides without further symptoms. In some cases a slight rise in temperature occurs, lasting a day or so, and this may be accompanied by malaise, loss of appetite, and diarrhea. Occasionally in individuals suffering from tertiary syphilis, the control injection causes a mild reaction, due probably to the susceptibility of the skin to traumatic irritation. This susceptibility has been noted frequently by syphilographers, and is described by Neisser as the pathologic condition of the skin itself.

Noguchi gives in tabular form his results from 400 cases, comprising 177 syphilitics, seventy-seven parasyphilitics, and 146 controls, including forty-six normal individuals and 100 cases representing a wide variety of non-luetic affections. In the non-syphilitics the reaction was absent without exception. In the primary and secondary stages of the disease the reaction was of a very mild grade; in about 50 per cent. of these cases no reaction was observed. In the hereditary and tertiary cases the reaction was more severe in form, and was present in 100 per cent. of the manifest tertiary affection, in 94 per cent. of latent tertiary, and in 96 per cent. of hereditary syphilis.

Noguchi does not assume that this test will replace the Wassermann reaction, and the relative merits of the two tests remain to be determined by further experience. It appears probable that the Wassermann reaction is more constant in the primary and secondary, and the cutaneous reaction in the tertiary and latent forms of syphilis. Moreover, it appears that the Wassermann reaction is more directly and immediately affected by antisyphilitic treatment than is the cutaneous reaction. It seems, however, that our resources in the management of syphilis have been enriched by the addition of a test which can be applied without special training and laboratory equipment.

Directly parallel to the skin reaction in syphilis is a test for gonococcal infection recently described by E. E. Irons.[3] In his experiments Irons used glycerin extract of gonococcus cultures; otherwise the same general method was followed as above described and with analogous results. It is of interest to note that diagnostic tests of great promise in typhoid, syphilis, and gonococcal infections have recently been discovered, and that they are based on the same biochemical phenomenon, namely, allergy.

We recently published a comprehensive discussion[4] of the various phases of this subject. Practicing physicians will await with impatience further reports of the clinical use of these reactions, and will welcome the opportunity to try out in practice such tests when reliable antigens can be obtained.

NICOTIN AND THE ADRENALS

Any light on the physiologic action of an article as widely used as tobacco, or its active principle nicotin, is of medical interest even if it cannot be immediately applied to problems of practical medicine. Hence attention may be called to some recent experiments[1] in which it is clearly shown that a very small amount of nicotin administered to an animal causes increased activity of the adrenals: within a few minutes after the administration of the nicotin an increased amount of the active principle of these glands, epinephrin, could, by physiologic tests, be detected in the blood coming from the glands.

Such a result is in harmony with what has been learned within recent years as to the innervation of the adrenal on the one hand and the general action of nicotin on the other. It has been shown that the secretion of epinephrin is under the influence of sympathetic nerves and that nicotin has the property of stimulating (and in large doses of paralyzing) sympathetic ganglia.

1. Noguchi, H.: THE JOURNAL A. M. A., April 20, 1912, p. 1163.
2. Noguchi, H.: Jour. Exper. Med., 1911, xiv, 557.
3. Irons, E. E.: THE JOURNAL A. M. A., March 30, 1912, p. 931.
4. Hektoen, L.: Allergy or Anaphylaxis in Experiment and Disease, THE JOURNAL A. M. A., April 13, 1912, p. 1801.
1. Cannon, Aub and Binger: Jour. Pharmacol. and Exper. Therap., March, 1912, p. 381.

Many attempts have been made to establish a connection between certain conditions of high blood-pressure and an overactivity of the adrenals; both nicotin and epinephrin are suspected by some of being factors in the causation of arteriosclerosis. The question naturally arises if tobacco may have not only a direct action on the blood-vessels, but also an indirect one exerted through its effects on the suprarenal glands; this question cannot be answered at present.

These experiments of Cannon and his co-workers are also of interest as another illustration of how drugs may affect the activities of some of the organs of internal secretion—organs which until recently were supposed to be rather independent of the action both of drugs and of the nervous system. We may recall in this connection the experiments which show the effect of emotions on the activity of the adrenals,[2] and others which show that some of the physiologic effects of iodin and probably some of those of diet[3] are exerted through another organ of internal secretion (the thyroid).

The activities of the organs of internal secretion are thus becoming of increasing interest not only in physiology and pathology, but also in pharmacology and practical medicine.

THE FEDERAL CHILDREN'S BUREAU AND ITS FIRST DIRECTOR

An act creating a Child Welfare Bureau was recently placed, with the President's approval, on our national statute-books. This legislation had been earnestly and continuously advocated for several years by progressive men and women, and during its pendency in Congress no reasonable argument was ever advanced against it. Certain conservative statesmen were shocked that "children were to be treated like pigs," but they were silenced by the retort of the more enlightened that, as a matter of fact, pigs were being better treated by the federal government than children, since the government has for years gathered and disseminated information concerning the welfare of pigs, but the questions relating to the life, health and welfare of children it has left almost untouched.

The new bureau will be part of the Department of Commerce and Labor. Its duties and functions will be wholly educational. It will make investigations, collect information, classify, digest and publish it, and furnish it on application to state, municipal and other authorities, as well as to private bodies or persons. It will study laws and ordinances bearing on child-labor, education, play, discipline, juvenile courts and like institutions, and all measures or proposed measures designed to protect, reclaim or healthfully develop childhood. Such studies will in turn suggest and influence further legislation.

It was in the highest degree important to give this new and largely experimental bureau a good start, and President Taft has done this, rising fully to his opportunity and surprising many politicians by appointing as the director and chief of the institution Miss Julia C. Lathrop of Chicago. She will be the first woman to direct a federal bureau. Her fitness for the position is quite exceptional; indeed, there are few whose qualifications, both natural and acquired, could be fairly compared with those of Miss Lathrop.

Her natural qualifications comprise administrative ability, tact, fidelity to ideals, industry and common sense.

The experience which fits her for her new position is the result of a public career that began in 1893, when she was appointed a member of the Illinois State Board of Charities. This board had supervision of all the insane of the state, and during the eight years of her connection with it Miss Lathrop made several trips to Europe to study different methods of caring for mental disease. She has always urged the adoption in this country of the system of boarding out in chronic cases and of psychopathic hospitals for the study and care of acute cases.

It had always been nominally the duty of the State Board of Charities in Illinois to visit every county almshouse and industrial school in the state, and Miss Lathrop made this her duty, in the performance of which she discovered shocking neglect of the children who were the wards of the state, dependent children in almshouses, delinquent children in common jails. As a result of this investigation she became one of the far-sighted workers for a juvenile court act. The law, however, only established the court; the payment of probation officers and the care of the children pending their commitment remained the task of those who had worked for the law.

Miss Lathrop was one among those who succeeded in obtaining the best juvenile court building and detention home for children in the United States. She has been of late years vice-president of the Juvenile Protective League, which now, since the county has assumed the control and payment of the probation officers, devotes itself to preventive work of all kinds. She is also chairman of the Juvenile Psychopathic Institute, an organization which undertakes the scientific study of juvenile delinquency in relation to physical defects and is pledged to the principle that a physician as well as a judge is needed in every court dealing with children.

SALVAGE

One misshapen consolation, it seems, we can pluck from the waves that engulfed the unfortunate *Titanic*. No lives will ever again be imperiled precisely as were those of the *Titanic's* passengers. Where Death walks soft-footed, choosing his victims delicately—as with the con-

2. Cannon and de la Paz: The Journal A. M. A., March 11, 1911, p. 742.
3. Hunt, R.: The Journal A. M. A., Oct. 19, 1907, p. 1323, and Sept. 23, 1911, p. 1032.

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sumptive—no one is startled and few protest. He may keep on his way unhindered, though the roll of those victims mount up to the thousands for every one that he seizes in some dramatic, heart-rending catastrophe which startles the world at once into protest and preventive action. Let the disaster only be great enough to stir the souls of men with horror and shame, and it will be a safeguard for later years.

Hardly had the icy water closed over the heads of the lost sixteen hundred before horrified nations proposed to make such amends as might be for their former remissness by international agreement to provide that no vessel shall put to sea without a supply of life-boats adequate to carry all on board. At once steamship officials were electrified into repudiation of the "all-for-speed" policy, and swung the ocean lanes southward. At present (or is it possible that we shall forget?) it seems probable that never again will an ocean liner, equipped with life-boats insufficient to accommodate half of those on board, endeavor to break a record by steaming at full speed through the ice-floes off the Grand Banks of Newfoundland.

As the Iroquois disaster, which unlocked theater doors all over the world, has tended toward the safety of the amusement-seeking public — as the *General Slocum* calamity demonstrated the impolicy of allowing life-preservers to be stuffed with lead—so the *Titanic* wreck will have rendered ocean travel safer. We wish we could say with conviction that the Cherry mine horror had put an end to the shameful economy which endangers the lives of those who work underground and that we had at hand conclusive evidence that the fire in the Triangle shirtwaist factory had ended once for all the practice of using fire-traps for factories and of locking the gates and doors of industrial establishments on the employees during working hours.

More saddening even than the loss of the heroic men who went down in that needless wreck is the fact that it takes a spectacular calamity to arouse public opinion to protest against wanton risk of life. Whatever merited condemnation may be meted out to those directly responsible—however we may deplore the scales of gold blinding the eyes of those who draw dividends from the luxury of "floating palaces"—the speed of "ocean greyhounds" —let us not forget that a share of responsibility rests on all of us if we have silently consented to the existence of known dangers.

It is said, for instance, that vessels on the Great Lakes offer every opportunity for wrecks proportionately as disastrous as that of the *Titanic* and that many of our large department stores are well devised to be the scene of extensive fires as tragic as that of the Iroquois theater. The embers of many malignant epidemics — typhoid, small-pox, diphtheria — smolder quietly among us, and there are those who scoff at efforts to stamp them out before they flame up into fierce conflagration.

Would that, taught by repeated calamity, we might at last be wise before the event!

Current Comment

PUBLIC OPINION AND LEGISLATION

In another department appears an extract from the *Congressional Record*, giving a discussion in the Senate last week on the Owen bill. Senator Jones of Washington read five telegrams from constituents, urging him to vote against this bill. One appeal stated that the passage of the Owen bill meant "the establishment of one of the worst trusts in the country." Another declared that "medical monopoly is the mainspring of the Owen bill." Another ardent soul, who signed himself "Doctor," asserted that "modern physiologic pathologists, by sheer merit, are rapidly supplanting allopathic pretensions"—whatever that may mean. All asked Senator Jones to vote against the measure. After reading the telegrams, Senator Jones said, "I think on a matter of legislation, what it is wise to do in a legislative way here, I should defer to the expression of opinion of my people, and these are the only expressions I have had in this way." If a senator is to be guided by the wishes of his constituents, he must first know what their wishes are. He naturally assumes that those interested will make their views known, and that those who do not, have no interest in the question at issue. Are any of the citizens of the State of Washington in favor of a national health organization? If so, they have evidently not made known their views to Senator Jones. Are any of the physicians or medical and philanthropic organizations of Washington in favor of the Owen bill? If they are, it would be well for them to stand up and be counted. Do the telegrams quoted above express the sentiments of the people of Washington or are there any persons in Washington who want Senator Jones to vote for a national health bureau? If so, will they please write or wire him, so that he may know how they feel about it?

BUSINESS AND SANITATION

It can hardly be considered the loftiest view which is advanced by Prof. E. W. Hope, medical health officer of Liverpool, that pounds, shillings and pence have been the mainspring of sanitary progress. Yet much hygienic progress has been made in response to the demands of commerce. Where business considerations are weighty and guided by far-sighted intelligence, there health measures are appreciated and enforced — to the benefit of the whole community. Those diseases which have impeded commerce have been the first to disappear. While the infantile exanthemata, for example, have declined in virulence, they have by no means been brought to or near the vanishing point of typhus, cholera, small-pox, yellow fever and the tropical malarias. The hygienist's authority waxes great in the community which learns that sanitary progress is essential to assured and profitable business development. International quarantines have been established very largely as a help to business. Small-pox is practically extinct in those ports where commerce would be interrupted by the detention of vessels and cargoes. If there were large commercial interests at stake in the elimination of pulmonary tuberculosis from the community, that disease would have to

go. It may be that typhoid fever will become extinct as soon as the American people grasp the meaning of its destructiveness. It will be said, and rightly, that this is not an altogether just view of the motives underlying the application of sanitary science to the affairs of civilization. Humane considerations are paramount in sanitary propaganda; it would be a grave error to hold that the work of men like Gorgas, Koch, Manson, Haffkine and Ross has been done merely to advance business interests. Nevertheless, an element of altruism is essential to sound and wholesome business enterprise. There is, of course, a false, parasitic prosperity, not founded on the well-being of the community from which it draws its sustenance; but this does not affect the fact that any community which wants to be prosperous must be healthful. And it has again and again been demonstrated that any community that strives to hide its lack of sanitation will ultimately ruin its business prospects by such duplicity. The history of recent cholera epidemics in certain Italian ports demonstrates this beyond peradventure, were any demonstration needed.

THE PRESENCE OF THE VIRUS OF EPIDEMIC POLIOMYELITIS IN OROPHARYNGEAL AND INTESTINAL SECRETIONS

While some investigators failed to obtain evidences of the presence of the virus of epidemic poliomyelitis in the secretions of the nasopharynx and of other places in the human body, Kling, Weinstedt and Pettersson[1] succeeded in demonstrating it in the secretions of the mouth, the nose, the trachea and in the intestines after death from this disease. They also have found it in the mouth and pharynx and in the intestinal canal of patients during life. They obtained the secretions of the mouth and pharynx by thorough rinsing with a syringe. The intestinal mucus was obtained after evacuating the intestines by means of an enema, and then thoroughly washing out the sigmoid with salt solution. The fluids thus obtained were filtered and injected into the peritoneal cavity and into the sciatic nerves of monkeys. In all, thirteen patients were examined and the presence of the virus demonstrated in twelve by the production of typical paralysis in the monkeys. From this demonstration it may be concluded that in cases of epidemic poliomyelitis the virus is present on the mucous membranes in question and that this fact must receive due consideration in our notions as to the ways in which the disease is spread.

CADAVERIC THERAPY

Dr. Park's suggestion, in his article in this issue, of the uses to which the fresh human corpse might be applied after sudden death will probably strike some people unfavorably and to others will seem extravagant. Sentiment rules the large class of people who would weep over a corpse for the production of which their own neglect or hard-heartedness may have been largely responsible. When, however, we consider the living instead of the dead there is considerable to be said for Dr. Park's suggestions. In the large hospitals of great cities receiving accident cases daily there are many opportunities to utilize some of these suggestions. In the therapeutics of the internal ductless glands we are obliged to use extremely heterologous extracts under present conditions, and there is a strong probability, to say the least, that properly prepared and selected homologous extracts as regards the species would be even more effective and perhaps have special advantages otherwise. It will probably be a long time, however, before such utilization will be practicable, at least to any great extent. If it could be it might settle some physiologic questions and perhaps raise some medicolegal ones, as, for example, if fruitful transplantations of the reproductive glands were to indicate strongly the correctness of the view that the germ cells are uninfluenced by somatic changes.

1. Kling, Weinstedt and Pettersson: Ztschr. f. Immunitätsforsch., 1912, xii, 316, 657.

CLEAN MILK AT A REASONABLE PRICE

The demand for healthy, clean milk and the revolution in its method of production have tended to increase its cost, and as more exacting demands are made on the producers higher prices may be expected. In a recent address before the Chamber of Commerce of Rochester, N. Y., Dr. John R. Williams attempted to show how this cost could be kept within reasonable bounds, or even lower than it is at present. He called attention to a number of practical points in the economical production of milk. In some instances land near cities worth as much as $1,500 an acre is used for dairying purposes, making the overhead charges so great that milk cannot be produced profitably at a moderate price. In other instances, attempts are made to pasture large areas of land, when by more intensive methods feed for the same number of cattle could be produced on a much smaller area. Lack of economical methods in the distribution of milk also has much to do with increased cost. Williams says that half of what the consumers pay for milk goes to pay for the delivery from the railway depot to the home. The overlapping of routes of distribution is also a source of increased cost to the consumer and of lessened profit to the distributor. Williams gives concrete figures as applied to Rochester to show how milk could be delivered to consumers at lessened cost with increased profit to the producer. His solution of the problem regarding distribution would be the leasing of the privilege of distributing milk to a smaller number of distributors. This multiplication of small retailers or distributors of food is recoghized as being one of the elements in the high cost of living, but in the case of milk in the large cities the objection of Williams as to distribution may not apply, as the business is sometimes in the hands of several large distributors who have apportioned the territory among themselves. Here, however, enters the question of monopoly, and the practical result is not a lowering of the price but the opposite. The points made by Williams, however, are well taken, and apply with especial force to the smaller cities. A plan for the public regulation of distribution and the elimination of a large number of small distributors would help to solve the problem of the price of milk.

Medical News

CALIFORNIA

Physicians Taxed.—An ordinance was passed by the city council of Monterey recently requiring physicians of the city to pay a business license of $2.50 quarterly.

Medical Evangelists.—The delegates of the College of Medical Evangelists, in conference at Loma Linda, March 30, voted $125,000 for improvements during the coming year. About $40,000 of this amount will be used in the construction of a reinforced concrete hospital, two stories in height.

Ultimatum to Chinese Physicians.—It is reported that every Chinese doctor in Los Angeles was ordered to cease business, March 25, when notice was served by the State Board of Pharmacy that any Chinese doctor caught in the act of prescribing for a patient would be arrested and prosecuted.

New Building for County Society.—A general plan has been formulated by the board of permanent quarters of the Los Angeles Medical Society for the erection of an office building by the association, to be occupied exclusively by physicians and dentists and to contain headquarters for the Los Angeles County Medical Association. The report was made that a lot could be purchased for $500,000 and that $500,000 additional could be obtained on a building loan.

Personal.—Dr. George H. Kress, Los Angeles, started for Europe, April 15.——Dr. Thomas W. Huntington has resigned as member of the San Francisco Health Board.——Dr. Herbert Gunn has been elected city physican of San Francisco.——Dr. C. L. Browning, Chico, is reported to be seriously ill with appendicitis.——Dr. T. P. Tisdale, Alameda, after fifty-five years of practice, has retired.——Dr. P. C. Remondino, San Diego, has returned after a six months' trip abroad.——Dr. P. A. Meneray, Santa Rosa, has been appointed physician of Sonoma County, vice Dr. S. S. Bogle, Santa Rosa, resigned. ——Dr. D. B. Van Slyck, Pasadena, was given a dinner by the medical men of that city, March 2, in celebration of his eighty-third birthday and sixtieth anniversary of his entrance into the practice of medicine. Dr. J. H. McBride acted as toastmaster.——Dr. Stanley P. Black, health officer of Pasadena, has consented to remain as medical health officer for the remainder of the year.

GEORGIA

Railway Surgeons Meet.—At the annual meeting of the Central of Georgia Railway Surgeons' Association held in Macon, April 11, Dr. J. G. Dean, Dawson, was elected president and Dr. J. R. Burdette, Tennille, was reelected secretary.

State Health Officers Meet.—The Association of State, County and Municipal Health Boards of Georgia held its second annual meeting in Augusta, April 16, under the presidency of Dr. J. C. Bloomfield, Athena, and elected the following officers: president, Dr. Eugene E. Murphey, Augusta; secretary-treasurer, Mr. A. V. Wood, Brunswick (reelected).

State Medical Association Meeting.—The sixty-third annual meeting of the Medical Association of Georgia was held in Augusta, April 17-19, under the presidency of Dr. W. L. Fitts, Carrollton, and the following officers were elected: president, Dr. W. W. Pilcher, Warrenton; vice-presidents, Drs. J. W. Palmer, Ailey, and T. H. Hall, Macon; secretary-treasurer, Dr. W. C. Lyle, Augusta; delegates to the American Medical Association, Drs. W. H. Doughty, Augusta; T. J. Charlton, Savannah; and alternates, Drs. E. G. Ballenger, Atlanta, and T. R. Wright, Augusta.

ILLINOIS

Personal.—Dr. N. P. Ward, Saybrook, is reported to be seriously ill.——Dr. C. T. Orner, Bloomington, who has been seriously ill, is reported to be improving.

The State Society Meeting.—Dr. S. Adolphus Knopf, New York City, will deliver the oration on medicine before the Illinois State Medical Society at Springfield, May 23, on "Some Modern Medico-Sociologic Conceptions of the Alcohol, Venereal Disease and Tuberculosis Problems."

New Officers.—Clark County Medical Society, at Marshall, April 11: president, Dr. S. C. Bradley; secretary-treasurer, Dr. S. W. Weir, both of Marshall.——Jersey County Medical Society, at Jerseyville, April 8: president, Dr. A. K. Van Horne (reelected); secretary-treasurer, Dr. A. M. Cheney, both of Jerseyville.

Results of Intern Examinations.—The result of the civil service examination for internships in the institutions of Cook County shows that of forty successful applicants 20 were graduates of Rush Medical College; 9, of the College of Physicians and Surgeons; 8, of Northwestern University; 2, of Bennett Medical College, and one of the Chicago College of Medicine and Surgery.

State Board Wins Suit.—The mandamus suit of the Littlejohn College and Hospital (formerly the American College of Osteopathic Medicine and Surgery) against the State Board of Health for recognition as a medical college, was commenced before Judge Bowles in the Superior Court of Cook County, April 17. During the trial, which lasted four days, Drs. George W. Webster and James A. Egan, of the State Board of Health, Dr. N. P. Colwell, secretary of the Council on Medical Education of the American Medical Association, and Dr. Fred C. Zapffe, secretary of the Association of American Medical Colleges, testified that the college did not comply with the requirements of the State Board of Health and that it failed to conform to the practice of the majority of medical colleges in the United States. Several members of the faculty of Littlejohn College testified as to their proficiency to teach, this testimony having been demanded by the State Board of Health. The case was given to the jury, April 22, and a verdict was returned April 23 in favor of the State Board of Health on all counts. The jury decided that the faculty of the Littlejohn College had not complied with the requirements of the State Board of Health as a medical faculty, and that the methods of didactic and clinical instruction had not come up to that pursued in the majority of the medical colleges of the United States; furthermore, that therapeutics was not properly taught, but only taught as required for the practice of osteopathy.

Chicago

Physicians' Club Meeting.—At the annual meeting of the Physicians' Club of Chicago held April 23, Drs. Edward H. Ochsner, Rudolph W. Holmes and Frank S. Johnson were elected directors and Dr. Alfred N. Murray was reelected secretary.

Personal.—Dr. Arthur R. Edwards, who has been ill for two months on account of severe gallstone attacks and operation, has recovered.——Dr. and Mrs. George S. Isham and Dr. John Dill Robertson have sailed for Europe.——Dr. David H. Fitzgerald was injured in a collision between his automobile and a street car, April 20.——Dr. Willis O. Nance has been appointed chairman of the committee on health of the Chicago city council.

Avoid Milk Dangers.—The current issue of the *Bulletin of the Department of Health* announces that the consumer can assist in minimizing the dangers due to milk by observing the following rules:

1. Never take the original bottle of milk into a sick-room; pour out only the amount immediately needed into a glass and let the patient drink from that.
2. Never let the milk stand uncovered in a warm room, or even in the ice-chest; always keep it covered.
3. Never let anyone, well or sick, drink directly from the bottle which is to be returned to the dealer.
4. Never return the bottle to the driver without its being washed clean.

A Successful and Notable Meeting.—The program as announced and carried out in the joint meeting of the West Side Branch and the Chicago Medical Society, April 17-19, for the discussion of mental diseases in their various phases, was a notable one. Many eminent authorities on psychiatry from twelve different states contributed papers and took part in the discussion. So impressed were those in attendance with the importance of the subject, that it was recommended that a similar conference be held next year, and resolutions were passed approving compulsory segregation or sterilization in certain cases of insanity, feeble-mindedness, epilepsy and criminality, as the best means of controlling the increase of these conditions through heredity, and urging a conference of Chicago medical and legal societies to arrange a program for a united effort toward the lessening of the defective classes.

Joint Conference on Quackery.—At a meeting of the council of the Chicago Medical Society, April 9, the medical education commission submitted resolutions, which were adopted, setting forth that the numerous medical quacks, irregular pathists, fake healers, abortionists and dealers in patent nostrums and proprietaries, preying on the public, under the title of doctor or otherwise, are negative factors of medical education, and that such practitioners and commercial agencies, actuated by greed rather than the preservation of public health, are a menace to the people and tend to discredit and degrade the healing art, and that the organized medical profession should work to guard the people against individuals who would exploit them for their own ignoble gain; requests that a conference be called

of the presidents and secretaries of the Chicago Homeopathic, Chicago Eclectic, Chicago Medical and Chicago Dental societies to appoint a joint committee thoroughly to investigate the number, character and methods of said irregulars, and particularly their advertisements, such joint committee to cooperate with the State Board of Health, the Chicago Health Commissioner and the various forces to improve medical education and practice, and after careful study of the situation, to report to the Council and to the similar executive bodies of the allied societies, with recommendations, on the basis of which united action may be taken by the entire organized profession and its sympathizers.

KENTUCKY

College Not Recognized.—A letter from the office of the State Board of Health of Kentucky states that after the close of the present session the Louisville National Medical College will not be recognized by the board.

Prohibit Sale of Ice Cream Cones.—The City Health Department of Louisville has issued an order affecting venders of ice cream on the streets. They will no longer be allowed to dispose of ice cream cones which are filled on the streets, but will be allowed to sell ice cream only in sealed packages.

Children's Hospital Report.—The twentieth annual report of the Children's Free Hospital shows that since January, 1911, 427 children have been admitted, 36 of whom came from the state outside of Louisville. Since the hospital was organized in 1892, 2,031 children have been received. During the year more than 500 operations were performed. The hospital has thirty-two endowed beds and fifteen supported beds. It also maintains a training school for nurses.

Personal.—Dr. William H. Wathen, who underwent a surgical operation at St. Anthony's Hospital recently, has recovered and resumed practice.——Dr. and Mrs. Louis H. Mulligan, Lexington, have returned from Europe.——Dr. Dunning S. Wilson has been reelected a director of the Louisville Antituberculosis Association.——Dr. Samuel B. Mills, one of the oldest practitioners of Louisville, is reported to be seriously ill with bronchitis, at the home of his son.——Dr. H. H. Duley, Paducah, is improving after an attack of appendicitis.

LOUISIANA

Tulane Research Expedition.—The first research expedition (for the study of malaria) from the Department of Tropical Medicine and Hygiene of Tulane University, sailed from New Orleans April 20, for Central America. The expedition is headed by Dr. Charles Cassedy Bass of the department. The members of the commission will return to the United States in time to attend the meeting of the American Medical Association at Atlantic City, before which it is intended to announce and exhibit the results of the investigation.

Health Work Shows Results.—According to the statements of Dr. W. T. O'Reilly, president of the New Orleans Board of Health, the city is in a much more healthful condition, since a general clean-up campaign was instituted by Dr. Oscar Dowling, president of the State Board of Health. The total number of communicable diseases reported in March, 1912, was 164, as compared with 846 in March, 1911, and the death-rate for the first quarter in the year was at the annual rate of 17.52 per 1,000, as compared with 18.85 per 1,000 for the corresponding period of 1911.

MARYLAND

Personal.—Dr. John J. Abel has been elected a member of the National Academy of Sciences.——Drs. William C. Lyon and Ernest H. Gaither have sailed for Europe.——Dr. Joseph S. Garrison, formerly superintendent of St. Luke's Hospital, was given a dinner, April 18, by the staff and nurses and was presented with an umbrella and a book.——Dr. Frank W. Pearson has returned from Europe.

MICHIGAN

Large Budget for Board of Health.—The Grand Rapids Board of Health has asked an appropriation of $98,390.10 for the coming year. This is the net amount and includes $15,000 revenue, which, it is estimated, the garbage department will yield.

Fighting Fraud.—At a meeting of the Wayne County Medical Society at Detroit, April 15, Secretary Haughey read the editorial from THE JOURNAL, March 23, 1912, page 863, entitled "What's the Matter with Michigan?" We quote from the *Wayne County Medical Society Weekly* as follows: "The president then introduced Mr. Hugh Shepherd, Prosecuting Attorney for Wayne County. Mr. Shepherd in a vigorous and eloquent address, told of his proposed campaign against 'quack doctors' and 'illegal practitioners' in Wayne County and asked both the active and moral support of this society. He said in part: Since my action against certain quack medicine men last Saturday, I have been pleased with the manifested support and offers of assistance by many of your profession. It seems strange that the prosecuting attorney has to wrestle with these and various other problems of reform. Why has it been necessary for me to do this? Simply because it was not done when I took office. Why not? Because the average public official wants to perpetuate himself in office. This perpetuation in office of incompetent officials is made possible because the law-abiding citizens do not vote, while the rabble does. No public official can conscientiously put his personal interests before the interests of the general public. It makes no difference what becomes of me if the interests of the people are safeguarded. In the various recent raids against cheap dance halls, slot machines, loan sharks and quack doctors, our efforts would have been fruitless without the active support of the police department. We also owe much to the publicity given by the newspapers. He outlined the methods of these quack establishments and compared the principals to highway robbers. One of these concerns had receipts of over $4,000 a month. Mr. Shepherd then asked the support of the society in his campaign against these people and suggested the passage of certain laws by which they could be 'run out of business.' He was emphatic in his assertion that the State Board of Registration should take action to revoke the licenses of the physicians attached to these quack concerns. Following the address, on motion, the board of directors was asked to appoint a committee of three to assist the prosecuting attorney in his fight against 'illegal practitioners.'"

MISSISSIPPI

State Health Board Meeting.—The first full meeting of the Mississippi State Board of Health since its organization in February was held April 8-10 in Jackson. The purpose of the meeting was to carry out the provisions of the act passed by the legislature, and in effect this year, creating the State Bureau of Vital Statistics. Dr. W. H. Rowan, Wiggins, was elected as chief sanitary inspector of municipalities of the state, and a resolution was adopted requesting Dr. W. W. Smithson, Jackson, secretary of the board, Dr. W. S. Leathers, University, director of public health, and the executive committee to cooperate in the work of taking definite steps toward organization and also the employment of a statistician.

State Association Meeting.—The fortieth annual meeting of the Mississippi State Medical Association was held in Jackson, April 9-11, under the presidency of Dr. D. J. Williams, Gulfport. The meeting was the largest in the history of the Association. The following officers were elected: president, Dr. S. W. Glass, Dublin; vice-presidents, Drs. J. C. Walker, Houlka; W. W. Parkes, Louisville, and E. C. Parker, Gulfport; secretary, Dr. E. F. Howard, Vicksburg (reelected); treasurer, Dr. L. B. Sparkman, Cleveland; councilors, Seventh District, Dr. S. A. Majure, Dixon; Eighth District, Dr. G. W. Wallace, Arbo; and delegates to the American Medical Association, Drs. D. J. Williams, Gulfport, and J. T. Longino, Jonestown. Vicksburg was selected as the next place of meeting. The following resolution was unanimously adopted:

> In view of the fact that the legislature acted in a most favorable way on the measures advocated by the State Medical Association, and because these measures were for the purpose of conserving the greatest of our natural resources, the health of the people; be it
>
> *Resolved*, That the Mississippi Medical Association, in session assembled, desires to express in a public way its appreciation and sincere gratitude for the passage of the medical practice act and the vital statistics act, and for the largely increased appropriation for public health work. We know that these laws will redound to the upbuilding of the citizenship of the state.

NEW YORK

Physicians Lose Property.—A valuable watch and chain was stolen from Dr. J. W. McGill, Rochester, in St. Mary's Hospital, April 11.——Watches and other valuables, worth $190, were stolen from the coats of Drs. Frederick Flaherty, A. B. Miller and Murray A. Cain, which were hanging in the rooms adjoining the operating room of St. Joseph's Hospital, April 13.

Personal.—Dr. Harry J. Brayton, for three years a member of the staff at Raybrook Sanatorium, has been appointed resident physician at Iola Sanatorium, the new institution for tuberculosis of Monroe County.——Dr. Chester Waterman, a member of the staff of the St. Lawrence State Hospital, Ogdensburg, has been promoted to physician second grade in

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that institution.——Dr. W. P. Bentley has been elected secretary of the Antituberculosis Committee of Cape Vincent.

Antituberculosis Exhibit.—An antituberculosis exhibit was held in Cape Vincent, April 8 and 9, at which E. V. Cavanaugh of the State Department of Health gave three lectures. Special emphasis was laid on the necessity of a tuberculosis hospital for Jefferson County and resolutions asking the supervisors to hasten the establishment of the hospital were unanimously adopted.——The antituberculosis societies of Philadelphia, Black River and Sacket Harbor have sent in similar petitions to the board of supervisors of Jefferson County.

State to Sterilize Habitual Criminals.—Governor Dix has given his signature to the Bush Bill, a measure introduced into the assembly by Dr. R. P. Bush of Horseheads, which provides for the sterilization of certain classes of male criminals and defectives confined in state institutions. The criminals coming under the provisions of this measure are those who have been convicted of rape or of such a succession of offenses as the board may decide to afford sufficient evidence of confirmed criminal tendencies to make it probable that they would transmit to offspring a tendency to crime, insanity or feeble-mindedness. The law creates a board to be known as the Board of Examiners of Feeble-Minded, Criminals, and Other Defectives and provides that this board is to be made up of one surgeon, one neurologist and one medical practitioner, each with ten years' experience.

State Society Election.—At the one hundred and sixth annual meeting of the Medical Society of the State of New York held in Albany, April 16-18, the following officers were elected: president, Dr. John F. W. Whitbeck, Rochester; vice-presidents, Drs. W. S. Gleason, Newburgh; W. F. Campbell, Brooklyn, and R. Paul Higgins, Cortland; secretary, Dr. Wisner R. Townsend, New York City (reelected); treasurer, Dr. Alexander Lambert, New York City; counsel, James T. Lewis, New York City; delegates to the American Medical Association, Drs. Wendell C. Phillips, New York City; Dwight Murray, Syracuse; James P. Warbasse, Brooklyn; L. H. Neuman, Albany, and Julius Ullman, Buffalo, and alternates, Drs. Walter L. Carr, New York City; O. E. Jones, Rochester; Grant C. Madill, Ogdensburg; Rosalie S. Morton, New York City, and William D. Johnson, Batavia. The association adopted resolutions urging the establishment of a national department of health, placing the state quarantine service in charge of the federal government, and thanking the legislature for its failure to pass bills against animal experimentation. A committee was appointed to instruct the public regarding this variety of research work. The next meeting of the society will be held in Rochester.

New York City

Personal.—Dr. and Mrs. George E. Brewer sailed for Europe on April 10.——Dr. John H. Coughlin has been appointed clinical professor of medicine in Fordham University School of Medicine.——Dr. Alice Farnam Leader was a passenger on the ill-fated *Titanic*, but fortunately escaped.

Virginians in New York Organize.—The University of Virginia Medical Society was organized March 22, the membership consisting of graduates in medicine of the University of Virginia resident in New York City. Meetings are to be held on the third Friday in October, January and March. Dr. William B. Trimble was elected president and Dr. Benjamin P. Riley, secretary-treasurer.

Hospital Superintendent Honored.—The members of the attending and associate staff of the Brooklyn Hospital tendered a banquet to Miss Mary Williams Osborn, who has just retired after having been superintendent of the hospital for ten years. Miss Osborn was given a handsome set of resolutions expressing the regrets of the assembled physicians at her departure and their best wishes for her future success.

Dr. Doty to Open Bureau of Sanitation.—Dr. Alvah H. Doty, former Health Officer of the Port of New York, it is reported, has decided to establish a bureau of general sanitation, with offices in this city. The work of the bureau will consist largely in expert advice in all matters relating to the improvement of sanitary conditions. It will provide headquarters where railway systems, corporations handling large numbers of employees, or those doing work in drainage, etc., may seek expert advice.

PENNSYLVANIA

Philadelphia

Superstition and the Doctor.—The sixth of the course of public lectures before the College of Physicians of Philadelphia will be given April 29 by Mr. Owen Wister on "Superstition and the Doctor."

Mütter Lectureship Open.—The Mütter Lecture instituted in the College of Physicians by the late Professor Thomas Dent Mütter, M.D., LL.D., on some subject connected with surgical pathology, will be delivered before the college in December, 1912. The compensation is two hundred dollars. The appointment is open to the profession at large. Applications, stating in full the subject of the proposed lecture, should be sent to the Committee on Mütter Museum before June 1.

Blockley Overcrowded.—Members of the Special Tuberculosis Committee of the Committee on Municipal Charities visited the Philadelphia General Hospital, April 17, and found the tuberculosis wards for both men and women greatly overcrowded. In the women's wards, rows of beds were placed so close together as to prevent a nurse passing between. Mingled with patients lightly affected were patients in the worst conditions and the glass houses where the patients take outdoor treatment were found to be small and inadequate.

Resolutions Regarding Dr. Musser.—At a meeting of the Faculty of Medicine held at the University of Pennsylvania, April 5, resolutions were adopted setting forth the useful and honorable services of the late Dr. John Herr Musser, and recording appreciation of the life thus closed, and respect for his memory; condolence with his friends; recognition of the void his death has made in the ranks of medical teachers; the loss to the community in the removal of a citizen identified with endeavor for the betterment of the people, and sympathy for his wife and family.

SOUTH CAROLINA

New Medical Examiners.—Acting on the recommendation of the South Carolina Medical Association, the governor on April 17 appointed the following members of the State Board of Medical Examiners: Drs. Harry H. Wyman, Aiken; J. T. Taylor, Adams Run; W. W. Fennell, Rock Hill; A. E. Boozer, Columbia; A. M. Brailsford, Mullins; H. L. Shaw, Fountain Inn, and C. B. Earle.

State Association Meeting.—The sixty-fourth annual meeting of the South Carolina Medical Association was held in Columbia, April 16-18, and the following officers were elected: president, Dr. Charles M. Rees, Charleston; vice-presidents, Drs. A. B. Knowlton, Columbia; D. M. Michaux, Dillon and C. P. Aimar, Charleston; secretary-treasurer, Dr. Edgar A. Hines, Seneca. President E. A. Alderman of the University of Virginia, delivered the principal address on "The Medical Man and his Service to the State."

TEXAS

Quarantine Proclamation.—The governor on March 30 issued his annual maritime quarantine proclamation, effective April 1. This quarantine applies on all gulf ports and along the Rio Grande border and is directed against all vessels, railway trains or persons coming from places infected with yellow-fever, small-pox, bubonic plague or cholera. All points south of 25 degrees north latitude are considered infected.

Tuberculosis Conference.—A southwestern conference on tuberculosis was held in Waco, April 16-17, on call of Governor Colquitt of Texas, at which representatives from Arizona, California, Kansas, Nevada, New Mexico, Oklahoma, Utah and Texas were present. Reports on antituberculosis activities were made by representatives from the various states and suggestions were made for the relief of consumptives from other states, for the discouragement of immigration of poor consumptives from other states and for the prevention of tuberculosis in the southwestern states.

Personal.—Dr. Henry Hartman, Temple, has been appointed state bacteriologist, vice Dr. S. N. Key, and will take charge of the laboratory May 1.——Dr. P. F. Robinson, Rock Springs, fractured his ankle and sustained serious injuries to his head in a runaway accident, March 27.——Dr. T. S. Walker, Dallas, was held up and robbed while making a professional call, March 25.——Dr. Don Price, Corsicana, is reported to be seriously ill with meningitis.——Dr. John S. Lankford, San Antonio, has been elected medical director of the San Antonio Life Insurance Company.——Dr. A. E. Spohn, Corpus Christi, who has been seriously ill, is reported to be very much improved.——Drs. C. S. Venable, J. V. Spring and G. W. Sims have been elected directors of the San Antonio Free Clinic.——Major Billie V. Ellis, M.C., N.G., Tex., Houston Heights, has been placed on the retired list on his own application.——Dr. J. S. Buie, Mertens, has been appointed assistant physician at the North Texas Hospital for the Insane, Terrell, vice Dr. R. E. Cloud, Houston Heights, resigned.——Dr. John

O. Kemp, city bacteriologist of San Antonio, has resigned. ——Dr. John H. Wood, Hubbard City, is reported to be seriously ill as the result of a cerebral hemorrhage.

GENERAL

"Phossy Jaw" Bill Signed.—The president signed the bill taxing white phosphorus matches, April 13. It is asserted that the coming into effect of this law will prevent the manufacture of matches made with white phosphorus.

National Conference on Pellagra.—The National Association for the study of Pellagra will hold its next triennial meeting at Columbia, S. C., October 3 and 4, the week following the meeting of the International Congress on Hygiene and Demography in Washington. All persons interested in pellagra are invited to participate, and the cooperation of officers of the Government Medical Services, State Boards of Health and State Hospitals for the Insane, is especially solicited. It is expected that several foreign governments and medical organizations will be represented at the conference. Those who wish to present papers should address the special committee, which consists of Drs. J. W. Babcock, J. J. Watson and J. A. Hayne, Columbia.

International Hygiene Congress.—Among the nine sections of the coming fifteenth International Congress on Hygiene and Demography, the second section, under the presidency of Dr. Russell H. Chittenden of the Sheffield Scientific School, Yale University, which deals with dietetic hygiene and hygienic physiology, will have papers from most distinguished sources on the following interesting topics: "The Specific Dynamic Action of Foodstuffs." The referees on this subject are Dr. Max Rubner of Berlin, Dr. N. Zuntz of Berlin, Dr. F. G. Benedict of Boston and Dr. Graham Lusk of New York. Dr. Max Rubner, whose fundamental researches on the utilization of foods in the human body are well known, is the principal referee. Professor Zuntz is to take up "The Work of Digestion and Specific Dynamic Action"; Dr. Benedict, "The Influence of the Ingestion of Food on Metabolism," and Dr. Lusk, "The Influence of Foodstuffs and their Cleavage Products on Heat Production." The referees on the second topic, "Nutrition and Growth" are to be Dr. Hans Aron, of Manila and Dr. Lafayette B. Mendel of New Haven. Dr. Aron will speak on "The Influence of Quantity and Quality of Food on the Growing Organism;" Dr. Mendel will discuss "The Rôle of Proteins in Growth." The studies of the past ten years in the nutritive requirements of early infancy have effected a revolution in methods of infant feeding. Dr. Schlossmann of Düsseldorf and Dr. Howland of New York are the referees on this subject. The rôle played by inorganic substances in the nutrition of man has acquired an added importance by reason of recent investigations. Dr. Strauss of Berlin will present a paper on "The Rôle of Common Salt and Water;" Dr. Jacques Loeb, of the Rockefeller Institute for Medical Research, on "The Antagonistic Action of Salts;" Dr. E. Abderhalden of Halle, on "The Relation of the Inorganic Constituents of Food to Those of the Tissue Cells;" Dr. Macallum of Toronto will discuss "The Distribution of Soluble Salts in Living Cells and the Forces Controlling It." The subject of the cost and nutritive value of foodstuffs will be presented by Dr. C. F. Langworthy, the Chief of Nutrition Investigations, Department of Agriculture, Washington, D. C. "Diet in Relation to Disease" will be treated by Dr. A. Magnus-Levy of Berlin, Dr. Carl von Noorden of Vienna, Dr. D. L. Edsall of St. Louis and Dr. Warren Coleman of New York. Dr. Magnus-Levy is to present a paper on "The Scientific Basis of Diet-Therapy;" Dr. von Noorden, "The Choice of Foodstuffs in Relation to Disease;" Dr. Coleman, on "Diet and Metabolism in Fever." A paper will be read by Dr. Rubner on "The Influence of the Preparation of Food on its Nutritive Value." The referees on "Ventilation in Its Hygienic Aspects" are Dr. M. J. Rosenau, professor of Preventive Medicine at Harvard University, and Dr. Yandell Henderson of New Haven. Dr. Rosenau will speak on "Organic Matter in the Expired Air," in which he has recently been making some very interesting investigations; while Dr. Henderson will present some considerations on the unknown factors in the ill effects of bad ventilation. "The Hygienic Physiology of Exercise" will be treated by Dr. Leon Asher of Bern; Dr. R. Tait McKenzie of Philadelphia, Dr. Theodore Hough of Charlottesville and Dr. William P. Lombard of Ann Arbor, as referees. The topics to be discussed are "The Influence of Exercise on the Nervous System;" "The Influence of Exercise on the Heart," "The Influence of Exercise on the Respiratory System," "Some of the Influences which Affect the Muscular Strength." President Taft will address the Congress at its opening session, September 23.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, April 13, 1912.

Lord Lister's Will

Lord Lister has left an estate valued at $320,000, the greater part of which he has devoted to the interests of science and charity. He has bequeathed $50,000 each to the Royal Society, King Edward's Hospital Fund, King's College Hospital (the last hospital to which he was surgeon), and to University College Hospital (where he was educated). With his usual modesty he adds: "I do not wish my name to be in any way associated with these sums in the future." He has also bequeathed $100,000 to the Lister Institute of Preventive Medicine. To the University of Edinburgh, at which he was professor of clinical surgery, he has given the insignia of the Prussian order of knighthood *pour le mérite* and of the English Order of Merit, medals received from the Royal Society and other bodies, diplomas or other announcements of degrees of membership; also honorary gifts and distinctions, including the caskets containing the papers of freedom of London, Edinburgh, Glasgow and the trowel presented to him on opening the nurses' home at Montreal. With regard to the disposition of these articles he states: "I expressly declare that it is my intention that the university authorities, for the time being, shall be at perfect liberty to dispose of all or any part of the gift—for example, by having the medals melted down, or the diplomas or other writing destroyed—at any time and in any manner that may seem to them desirable."

The Annual Meeting of the British Medical Association

Arrangements for the eightieth annual meeting of the British Medical Association are now completed. The annual meeting of the representatives opens on July 19 at Liverpool. The sectional meetings begin on the 24th and are continued on the 25th and 26th. In the section of medical sociology the insurance act will be especially discussed.

The Transmistion of Sleeping-Sickness

Important experiments on the transmission of human trypanosomes by the *Glossina morsitans* have been carried out in northern Rhodesia by the Luangwa Sleeping-Sickness Commission. The following conclusions have been established: 1. The human trypanosome in the Luangwa Valley is transmitted by *Glossina morsitans*. 2. Approximately 5 per cent. of the flies may become permanently infected and capable of transmitting the virus. 3. The period which elapses between the infecting feed of the flies and the date on which they become infective is approximately fourteen days. 4. An infected fly retains the power of transmitting the disease during its life and is infective at each meal. 5. Mechanical transmission does not occur if a period of twenty-four hours has elapsed since the infecting meal. 6. There is some evidence that in the interval between the infecting feed and the date on which transmission becomes possible the parasites found in the flies are non-infective. 7. Certain species of buck have been found to be infected with the human trypanosome. 8. A native dog has been found infected.

Detection of Malingering by Administering an Anesthetic

As stated in previous letters to THE JOURNAL, the Workmen's Compensation Act has greatly increased malingering on the part of workmen who have met with accidents. A malingerer was detected recently in the following ingenious manner: He took his employers into court because they had refused compensation for a stiff knee. They alleged that he stiffened it purposely. The medical referee suggested to the judge that the man should be put under an anesthetic. As soon as the man became unconscious the knee moved easily and freely and so he lost his case.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, April 5, 1912.

Proceedings Against a Well-to-Do Patient Who Received Free Treatment in a Hospital

Early in 1911 a well-to-do patient entered the free ophthalmologic service of a hospital and was operated on for a cataract. He thus not only deprived the medical profession of the fees which one of its members ought by right to have received, but also deprived a needy patient of a bed in the hospital. The Syndicat général des oculistes français pro-

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tested to the director of the hospital, who, after learning the easy circumstances of the patient, brought suit against him, by authorization of the minister of the interior, for $200 (1,000 francs) damages. To avoid prosecution, the patient paid the 1,000 francs and the minister of the interior authorized the director of the hospital to pay one-half of the sum to the *syndicat* in recognition of the injury to the medical profession. This precedent is one of great importance, for, if it is followed, well-to-do patients will no longer dare to seek treatment in charity hospitals. The *syndicat* urges all opthalmologists to report to the secretary general for prosecution all cases in which persons in comfortable circumstances have received treatment or operation for ophthalmologic diseases in free hospitals.

Manufacture of Absinthe

The senatorial commission which is considering the manufacture of absinthe has just finished its work, and has decided unanimously that the essence of thujone should not be used in any liquor and that the nomenclature of plants containing thujone should be officially established and traffic in them forbidden. Two years' grace will be allowed the manufacturers of absinthe in order that the supplies may be utilized, and three years' grace to the dealers.

A Victim of Professional Duty

During October, 1911, Dr. Victor Veau, surgeon of the hospitals of Paris, contracted a serious diphtheria complicated by paralysis of all the limbs during an epidemic of croup at the hôpital des Enfants-Assistés. The president of the republic has recognized the devotion of Dr. Veau, whom he has appointed chevalier of the Legion of Honor. Moreover the Carnegie Foundation has recently awarded Dr. Veau its large gold medal for civil heroism.

Creation of a Medicolegal Institute

The general government and the Department of the Seine have agreed to cooperate in the erection in Paris of a medicolegal institute comprising the administrative and educational services at present installed in the morgue. The medicolegal institute will undertake the identification of unknown corpses, judicial autopsies, and other medicolegal questions calling for expert knowledge; it will also give instruction in legal medicine with laboratory and practical work. The buildings for the institute will be constructed on ground furnished by the Department of the Seine, which will also be responsible for the direction of the work of the institute. The general government will be responsible for one-half of the expense, which will amount to $200,000 (1,000,000 francs).

Death of Dr. Paul Brousse

Dr. Paul Brousse, director of the Asile d'aliénés de Ville-Evrard in Paris, former president of the municipal council in Paris and former deputy, has just died, aged 68. Before entering on his administrative work, Dr. Brousse played a considerable rôle in the action of the socialist party of which he was one of the founders and one of the most influential members.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, April 4, 1912.

Personal

Professor Pankow of Freiburg has accepted the call as director of the academic gynecologic clinic at Düsseldorf.

Professor M. Hahn has accepted the call as director of the hygienic institute at Freiburg.

Radium Institute for Biologic and Therapeutic Research at Berlin

April 1 the institute founded by the efforts of Professor His for biologic and therapeutic research on radium in the royal Charité was opened. The aim of the institution is the investigation of the therapeutic effects of radio-active substances such as radium, mesothorium, radiothorium, etc., and their decomposition products. It possesses laboratories for chemical, zoologic and botanical research and a complete equipment for physical measurements. In all there are about fifteen places for research workers. The institute is connected with a policlinic in which internists, surgeons and other interested specialists will have opportunity to treat patients with radiation apparatus of various forms and strength, emanators for inhalation in closed rooms, apparatus for drinking the emanations, and other forms of application. The institute is founded through a fund appropriated by the Kaiser Wilhelm Society for Scientific Research, as well as by grants from various industrial companies. The management is in the hands of privy councilor His, whose representative is Dr. Gudzent. He is supported by a commission to which Professors Kraus, Orth, Lesser, Hildebrand, Bier, Zuntz, Hertwig, Hahn and Marckwald have assured their cooperation. Also a permanent physicochemical collaborator has been secured.

Libel Suit Following an Alleged Lourdes Miracle

An Austrian clergyman, Pastor van der Bom, published a pamphlet with the title "A Genuine Miracle of Recent Times" describing the healing at Lourdes of a laborer named de Rudder who had suffered for eight years with a broken leg which physicians pronounced incurable and van der Bom publicly offered to pay $250 (1,000 Kronen) to anyone who should explain this miracle on natural principles or who could deny the historical truth of it on valid grounds. Dr. Aigner of Munich presented himself as a candidate for the offered prize. Proposals were made for a court of arbitration, without its being possible to arrive at any agreement. Dr. Aigner published a pamphlet stating that the historical validity of the asserted miracle was untenable. Both parties supported their point of view in a series of newspaper articles. As the choice of a head for the arbitration court could not be satisfactorily settled, Dr. Aigner declared himself willing to leave the verdict in this matter of such importance to the Roman Catholic church to the decision of a bishop or to the Vatican. This proposal was also declined by Pastor van der Bom. A public demand that a German court be declared competent to determine the matter remained likewise unanswered by him. Instead of this, Pastor van der Bom published in a pamphlet the entire correspondence of the parties and again offered the prize. Dr. Aigner then brought suit against van der Bom on the ground of the libelous form of this pamphlet. The suit came to trial at Linz, Austria, and the jury pronounced Pastor van der Bom guilty of having held up the plaintiff to public scorn, and the court confirmed the verdict with a fine of $37.50 (150 kronen) or three days imprisonment and cost.

Mortality in the German Empire for 1908

Privy councilor Rahts, a member of the imperial health office, publishes an interesting article based on official statistics on the mortality of Germany for 1908, the principal results of which may be of interest to the readers of THE JOURNAL: The statistics for the year 1908 show an increase in the general mortality, the greatest factor being an increase among children of 1 to 15 years of age. On the other hand, the average age reached at death by persons who died after 15 years of age was higher than in the two previous years. The number of deaths from pulmonary tuberculosis and other diseases of the respiratory tract (with the exception of pneumonia) and from the common communicable diseases diminished in number, so that in general the conditions in regard to the mortality during 1908 were quite favorable, especially if they are compared with the average of the previous decade from 1897-1906. The rate of infant mortality has decreased as compared with the preceding decade, although it was somewhat higher in 1908 than in 1907. There was, as compared with the previous decade, an increase in the number of deaths from cancer and other new growths, suicide, accident and syphilis. The attainment of advanced age was more frequent in the thinly populated districts than in those in which there are a number of large cities. The mortality rate in men is found to be higher than that for women.

Lack of Cadavers in the Anatomic Institute at Leipsic

The anatomic institute at Leipsic and the course in surgery at the university, which depend for a supply of cadavers on the anatomical institute, have suffered for a number of years from a marked deficiency of bodies. As a consequence, instruction in anatomy and surgery has been naturally affected and it has been assumed in Leipsic that this is the reason why many other universities were preferred to that of the University of Leipsic. For this reason the Saxon government has introduced a bill into parliament regulating the supply of bodies for scientific purposes and post-mortem examinations. The bill contains the following principal provisions: Human bodies that are not claimed by the relatives for the purpose of burial at their own expense within forty-eight hours after death or the finding of the body, shall be devoted to scientific purposes unless special reasons prevent. The delivery shall not be made if the demand for the body is opposed for sanitary reasons or if the body is so decomposed that it is no

longer suitable for anatomical instruction or if its acceptance for such purposes is declined or if the place to which it should be delivered waives the receipt of it for some other special reason. The delivery, as a rule, is made to the anatomical institute of the University of Leipsic. In certain cases also cadavers may be given to the operation course in surgery for army surgeons in the garrison hospital at Dresden or to the scientific academy of arts at Dresden or to some other scientific institution. The parts of the body not used for scientific purposes by the institution are given fitting burial at the expense of the institution. The bodies of such persons as have died in public hospitals, educational institutions or insane asylums, so far as there are no legal or sanitary objections are, as a rule, sectioned in these institutions and only delivered for scientific purposes after the necropsy. The section may be omitted with the consent of the physician who treated the deceased immediately before death. Naturally the socialist press has already instituted a strenuous newspaper crusade with the claim that the poor wage-earner will now not be secure against ill usage even when dead. It is easy to understand that this material for agitation is eagerly welcomed by the socialists (*Sozialdemokraten*), who take every opportunity to stir up the working classes, while it may be expected from the sound sense of the majority of the population that they will recognize the true significance of the bill and that the parliament will pass it.

Advancement of Athletics Among the Student Body

At the invitation of the University of Breslau, the representatives of the German universities met in Berlin recently to discuss measures for the advancement of athletics among the students. The meeting was presided over by our hygienist, Professor Rubner. The principal address was made by Professor Partsch of Breslau. At the end of the debate the following statement of principles was adopted: There is a timely demand for the German universities to give attention to athletics. This assembly unanimously declares it to be a duty of the state to provide the necessary means therefor. The fulfilment of this duty is most suitably entrusted to a special committee for athletics. The cooperation of the student body is regarded as especially desirable. For the further advancement of this matter an annual representative assembly of the committee is contemplated. The establishment of gymnasiums and athletic fields is regarded as necessary. Annual local competitive games among the students are to be established, and every three years German university olympic games. In these matters the assembly expressed itself in favor of sympathetic cooperation with the German academic league for athletics. The next German olympic games will occur in Leipsic in 1913 by an agreement of the assembly and the German academic league for athletics with the University of Leipsic. For the next place of meeting the Berlin University was selected.

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, April 3, 1912.

A Crematorium in Austria

The municipality of Reichenberg, a city in the northern part of Austria, had decided to erect a crematorium. The government refused consent on legal grounds. The municipality, however, governed by modern men, fought this decision until the supreme court of administration (*Verwaltungs-Gerichtshof*) decided that the building of a crematorium was not contrary to the existing laws. There is, in this country, however, no law that permits the operation of a crematorium; the law provides only for the ordinary burials in a cemetery. The supreme court judicially added to its decision the clause that, although at present there is no law concerning the permission of cremation, there is no reason to see why such a law could not be brought into force within a reasonable time by parliament or by an ordinance of the government. The friends of cremation will, therefore, inaugurate a campaign in order to obtain such a law. Medical circles here are, of course, widely in favor of the movement and, no doubt, the occurrence in Reichenberg will do much to strengthen the position of the cremationists.

A Generous Gift for Medical Purposes

A sum of $600,000 (3 million kronen), has been given to the Jewish Board of Vienna by a well-known philanthropist, Mr. David von Guttmann, under the condition that a children's hospital be erected, and that other funds for similar purposes be united with it in order to insure the upkeep of a large, first-class institution. There is at present in Vienna a real lack of beds for sick children. Altogether not more than about 600 beds are available for that purpose, even if all the homes for convalescents are counted, and two smaller hospitals cannot be opened for lack of funds. The mayor has been forced to appeal to the general public for funds for medical purposes, but the public is a little shy because it fears that the money might be used for political or party interests, even in charitable institutions. Therefore Mr. Von Guttmann has bestowed this money on an association whose impartiality is unmistakable. He required that at least 150 children's beds be added to those in existence. Probably the new hospital will form an annex to the Rothschild Hospital of the Jewish community in Vienna, because this one can dispose of the necessary area without any fresh expenditure. Of course, children of all creeds will be admitted, free of charge, if their parents cannot pay.

Marriages

ROBERT EUSTIS HOYT, M.D., U. S. Navy, to Miss Lucille Edwards Cook Karmany, at the Marine Barracks, Norfolk, Va., April 3.

WILLIAM FLETCHER MCPHEDRAN, M.D., Toronto, Ont., to Miss Lilla Simpson of Frederick County, Md., at Plainfield, N. J., April 9.

CHARLES MATTHIAS LINEHAN, M.D., Dubuque, Ia., to Miss Florence Mary Cunningham of Beloit, Wis., April 24.

JAMES WILLIAM WILLIAMSON, M.D., Murdo, S. Dak., to Miss Virginia Edison, at Mitchell, S. Dak., April 8.

ALGIE HUFFMAN SHOCK, M.D., Huntington, Ind., to Miss Edna Seward of Bloomington, Ind., April 10.

HORATIO E. ABRAHAMS, M.D., to Miss Clara Sophia Apfel, both of Trinidad, Colo., at Denver, April 8.

HAROLD RUCKMAN MIXSELL, M.D., New York City, to Miss Charlotte Mallory of Easton, Pa., April 12.

JOHN C. HANNA, M.D., to Miss Ethel Roy Aylesworth, both of Big Prairie, O., at Wooster, O., April 6.

C. CHARLES HUTTON, M.D., Picayune, Miss., to Miss Olla Irene Rawling of New Orleans, April 8.

CONDA C. HEADY, M.D., Bloomfield, Ia., to Mrs. Mollie Riley of Moulton, Ia., at Bloomfield, April 7.

PAUL K. SWITZER, M.D., Fort Motte, S. C., to Miss Mollie Layton of Spartanburg, S. C., recently.

MAURICE D. KEFAUVER, M.D., to Miss Bertha D. Brenner, both of Smithsburg, Md., April 11.

ADOLPH LEONARD KYLLO, M.D., to Miss Oliva M. Pfeilsticker, both of Grantsburg, Wis., April 6.

JACOB LOUIS TUECHTER, M.D., to Miss Emily Matilda Wagner, both of Cincinnati, April 16.

ALEXANDER E. HORWITZ, M.D., to Miss Dora Prinz, both of St. Louis, March 31.

Deaths

Paul Casper Freer, M.D. Rush Medical College, 1884; director of the Bureau of Science of the Philippine Islands and dean of the Philippine Medical College, died in Baguio, Philippine Islands, April 17, from acute nephritis, aged 49. Born in Chicago, he received his early education in Germany and in Chicago and took a course in chemistry in the University of Munich under Professor Von Bayer, graduating with the highest honors in 1887. A year later he was made assistant to Professor Michaels at Tufts College, Boston, and two years later was made professor of chemistry in the University of Michigan, Ann Arbor. In 1901 he was requested to undertake the creation of the Bureau of Science of the Government of the Philippine Islands, in Manila, and after its organization remained there as director, chemist and superintendent of the government laboratories and member of the Philippine Islands Board of Health. He assisted in the founding of the Philippine Medical College and was made its dean and professor of chemistry. He was a member of the Philippine Islands Medical Association and editor of the *Philippine Journal of Science*. Dr. Freer was a scientist of great promise and his early death is to be deplored.

Mark J. Lehman, M.D. University of Alabama, Mobile, 1873; of New Orleans; physician for the Howard Association during the yellow fever epidemic of 1878; acting assistant surgeon U. S. Marine-Hospital Service and on duty at the New Orleans Quarantine station at that time, and later on duty in Brownsville, Tex., Pensacola, Fla., and Mexico; for several years physician of Iberville Parish, Louisiana, and for a time coroner of the parish and city physician of Plaquemine; one of the founders of, and a professor in, the Louisiana State College of Dentistry; for fifteen years an editorial writer on the *Jewish Ledger*; died at his home in New Orleans, April 7, aged 57.

Joseph Newton Lewis, M.D. College of Physicians and Surgeons, Baltimore, 1892; a member of the American Medical Association; one of the most prominent practitioners of Roanoke, Va., assistant surgeon to the Norfolk and Western Railroad and one of the proprietors of the Lewis-Gale Hospital; was instantly killed in an automobile accident, about five miles from Roanoke, April 6, aged 44. At his funeral physicians of the city acted as honorary pallbearers.

Louis W. Crampton, M.D. University of Maryland, Baltimore, 1869; Colonel M. C., U. S. Army; died at San Bernardino, Cal., April 12, from pneumonia, aged 63. Colonel Crampton entered the Medical Corps of the Army in 1875, and had been chief surgeon of the Philippine division. He was to have been retired May 8, on account of age. He was a member of the American Medical Association and the Association of Military Surgeons of the United States.

Harold Flagg Jewett, M.D. Long Island College Hospital, Brooklyn, 1893; a member of the Medical Society of the State of New York; instructor of obstetrics in his alma mater; gynecologist to the Bushwick and Swedish hospitals, Brooklyn, and assistant obstetrician to the Long Island College Hospital and Kings County Hospital; died at his home in Brooklyn, April 12, from pneumonia, aged 42.

William E. Minahan, M.D. Rush Medical College, 1891; of Fond du Lac, Wis., was one of the heroes who went down to death with the Titanic off the banks of Newfoundland, April 15, aged 44. Dr. Minahan was a member of the American Medical Association and one of the most prominent surgeons of Eastern Wisconsin; a man of unusual skill and ability, as well as force of character.

Richard Archibald Patterson, M.D. Medical College of Virginia, Richmond, 1848; surgeon of the Fifty-Sixth Virginia Infantry, C. S. A., during the Civil War; since 1869 a manufacturer of tobacco; president of the Richmond Tobacco Exchange, and president of the Savings Bank of Richmond since 1889; died at his home near Richmond, April 8, from pneumonia, aged 86.

Samuel Fry, M.D. George Washington University, Washington, D. C., 1902; for several years a practitioner of Washington, who went to San Antonio, Brazil, S. A., in 1909 to take charge of the Madeira-Mamorie Railway Hospital and afterward settled in New York City; died at his old home in New Orleans, April 9, from the effects of tropical fever, aged 41.

Charles William Fox, M.D. University of Louisville (Ky.), 1850; for many years a practitioner of Virginia City, Nev., but for the last forty years a financier of San Francisco; who retired from business in 1905 and afterward resided in San Jose; died in his apartments in the Hotel Vendome in that city, February 17, from pneumonia, aged 85.

Charles E. Postley, M.D. Howard University, Washington, 1886; Georgetown University, Washington, 1891; formerly president of the Board of Commissioners of Hyattsville, Md., and accountant of the Indian Bureau of the Interior Department, Washington; died in his apartments in Washington, April 6, from heart disease, aged 64.

Frank Lee Drummond Rust, M.D. Harvard Medical School, 1897; a member of the Massachusetts Medical Society and a well-known ophthalmologist of Boston; ophthalmic surgeon to the Carney Hospital and associate professor of ophthalmology in Tufts College Medical School; died at his home in Boston, April 10, from septicemia, aged 38.

James Dwight Bemis, M.D. Eclectic Medical Institute, Cincinnati, 1879; local surgeon at Fremont, Ohio, for the New York Central lines and for two terms trustee of the Xenia Orphans' Home; was found dead in his apartments in Fremont, April 13, from heart disease, aged 52.

James Carter, M.D. University of the South, Sewanee, Tenn., 1902; was found dead in his office in West Helena, Ark., February 23, aged 38. Death was due to a self-inflicted gunshot wound of the head.

William A. Hinchman, M.D. University of Maryland, Baltimore, 1873; a member of the Medical Society of the State of Pennsylvania; a veteran of the Civil War; a member of the Board of Education of McKeesport and visiting physician and president of the McKeesport Hospital; died at his home, April 9, aged 63.

William Glenn Allen, M.D. Tulane University, New Orleans, 1873; of Newton, Miss.; a member of the Mississippi State Medical Association; was fatally wounded in a street duel in Newton, March 28, in which he killed his opponent; and died in the Newton Sanitarium, March 29.

Arthur Jackson Brewe, M.D. Jefferson Medical College, 1905; a member of the American Medical Association; for several years identified with the medicolegal department of the Philadelphia Rapid Transit Company; lost his life in the sinking of the *Titanic*, April 15, aged 45.

David F. Earnest, M.D. Albany (N. Y.) Medical College, 1867; of Port Norfolk, Va.; physician to the Norfolk County Jail; died at his home in Port Norfolk, March 28, from pneumonia, aged 66. Physicians of Norfolk acted as honorary pallbearers at his funeral.

George P. Cosby, M.D. Kentucky School of Medicine, Louisville, 1859; for many years a member of the Vanderburg County, Ind., Medical Society; who retired from active practice in Evansville in 1897; died at his home April 17, from heart disease, aged 72.

Ira Adelbert Hix, M.D. New York University, New York City, 1883; health officer of Binghamton, N. Y., from 1898 to 1908 a member of the board of managers of the City Hospital; died at his home in Binghamton, April 12, from typhoid fever, aged 53.

Alfred L. Saylor, M.D. Rush Medical College, 1886; of Sherwood, Ore.; a member of the American Medical Association; surgeon general of Oregon from 1887 to 1894; died in the Good Samaritan Hospital, Portland, Ore., April 7, from pneumonia, aged 64.

Robert Arthur Haliburton MacKeen, M.D. Bellevue Hospital Medical College, 1880; examiner in clinical surgery in the Halifax, N. S., Medical College; died at his home in Glace Bay, January 14, from arteriosclerosis, aged 54.

William H. Feddeman, M.D. University of Maryland, Baltimore, 1888; a member of the American Medical Association; was found dead in his rooms in Baltimore, April 12, from the effects of an overdose of chloroform, aged 46.

Mary Jane Booth, M.D. Pulte Medical College, Cincinnati, 1885; at one time in charge of the Ohio Hospital for Women and Children, Cincinnati; died at her home in that city, April 9, from typhoid fever, aged 68.

Martin J. Lunn, M.D. College of Physicians and Surgeons, Chicago, 1902; a member of the Illinois State Medical Society; died at his home in Chicago, April 19, from septicemia, due to an operation wound, aged 41.

Francis Watson Bowron, M.D. New York University, New York City, 1871; a member of the Medical Society of the State of New York; died at his home in Brooklyn, April 11, from heart disease, aged 66.

Warren Brown Maxwell, M.D. Dartmouth Medical School, Hanover, N. H., 1876; a member of the Massachusetts Medical Society; died at his home in Grafton, April 11, from pneumonia, aged 72.

John I. Burford, M.D., a retired practitioner of Louisville; died at the home of his son in that city, February 22, from injuries received three weeks before by a fall on the ice, aged 91.

Langdon Cheves Duncan, M.D. Medical College of the State of South Carolina, Charleston, 1843; a retired practitioner of New York City; died at his home April 5, from senile debility, aged 90.

Thomas H. Cornwall, M.D. Rush Medical College, 1875; for many years a practitioner of Mount Hope, Kan.; died in a hospital in Wichita, April 8, aged 61.

Philo P. White, M.D. University of Louisville, Ky., 1874; died at his home in St. Louis, March 12, from chronic nephritis, aged 68.

J. B. Philley (license, Texas, Ninth Judicial District Board, 1900); of Granbury; was shot and killed at Hill City, April 5, aged 42.

A. M. Bruce (license, Oklahoma, 1908); for many years a practitioner of Bartlesville, died recently and was buried April 7.

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE MEDICAL FRAUD ON THE PUBLIC AND ON THE PROFESSION

ECKMAN'S ALTERATIVE

Another Fraudulent Consumption Cure

Some time ago a consumption cure humbug, Tuberculozyne, was exposed in THE JOURNAL. Eckman's Alterative resembles Tuberculozyne in three particulars: (1) it is sold as a "consumption cure;" (2) it is exploited by a horse doctor; (3) it is a cruel fraud. It further resembles Tuberculozyne in that it is advertised by the testimonial method, but then practically all "patent medicines" are sold in the same way. The product is sold by the Eckman Manufacturing Co., Philadelphia, and is said to be the "discovery" of T. T. Eckman, a veterinarian, who first tried it on cows and later experimented on a member of his own family.

Instead of being sold on the mail-order plan, as Tuberculozyne is, Eckman's Alterative is sold through the medium of the druggists. It is heavily advertised in the daily press, the advertisements consisting, generally, of testimonials to which are attached laudatory paragraphs about the preparation with the names of the local druggists inserted. An extensive advertising campaign is being carried on and it is reported that the Eckman concern is going to spend $150,000 during 1912 in advertisements. Here are some of the claims made for this nostrum:

"A medicine made for the cure of tuberculosis. It has cured this disease again and again."

"Cures have been effected . . . where no intelligent care was taken of the patient, where money was scarce; good food and good cooking unusual."

"Consumptive patients need no longer dread either the fate that formerly overtook all sufferers from lung trouble, or costly and often terribly inconvenient journeys far from home to other climates or to some expensive sanatorium. Hundreds are now staying quietly at home curing themselves at no expense beyond the cost of a few bottles of medicine."

"The Sanitarium treatment has only benefited temporarily, while Eckman's Alterative has cured."

These quotations are sufficient to show that the firm uses the methods classical to "patent-medicine" fakers: that of attempting to discredit the rational scientific treatment of disease and to substitute therefor a worse than worthless nostrum.

Eckman's Alterative was analyzed in the laboratory of the American Medical Association and the chemists' report follows:

LABORATORY REPORT

Eckman's Alterative comes in an 8-ounce bottle and is a dark brownish, turbid liquid with a strong odor of cloves. The label declares the presence of 14 per cent. of alcohol. Qualitative tests demonstrated the presence of alcohol, calcium, a chlorid, small amounts of vegetable extractive and traces of vegetable tissue. No other substance of a medicinal nature was detected. Quantitative examination gave the following results:

Total solids (residue at 100 C.), including 3.93 gm. of calcium chlorid ($CaCl_2$)....	6.25	gm.
Alcohol	11.22	gm.
Insoluble residue	0.073	gm.
Water and undetermined, to make.....	100.00	c.c.

This analysis agrees in general with that made by the New Hampshire authorities who reported the presence of 3.59 per cent. of calcium chlorid and small quantities of powdered cloves.

Here then we have a mixture of alcohol, calcium chlorid and cloves, which every intelligent physician knows is perfectly worthless for the cure of consumption, sold at an exorbitant price—$2 for eight ounces—under the cruelly false claim that it will save the tuberculous. As has been pointed out time and again, the inherent viciousness of fraudulent consumption cures lies in the fact that they lead the sufferer to abandon or ignore those hygienic and dietetic measures which are his only hope. It is not easy, it is not always comfortable, it is frequently disagreeable to follow the treatment which experience has shown to give the only hope of success. It is much easier to continue living the life which, in so many cases, has been responsible for the consumptives' condition; merely taking at stated intervals a medicine which its manufacturers declare to be all that is necessary to bring about recovery.

Hoping against hope that in the "consumption cure" nostrum the secret has at last been wrested from nature by which the White Plague may be vanquished, the ever-optimistic consumptive sacrifices money which should go into good food, sacrifices all too precious time and, finally, life itself, and the consumption cure faker waxes rich in the toll of blood exacted from his credulous victims.

ANTIDIABETICUM—BAUER

In Germany the makers of nostrums, their methods and their products are systematically exposed by the Society for the Suppression of Quackery (Deutsche Gesellschaft zur Bekämpfung des Kurpfuschertums) through its publication, the *Gesundheitslehrer*, under the aggressive editorship of Dr. Kantor.

Ludwig Bauer,[1] the manufacturer of "Antidiabeticum," inserted advertisements in daily papers asserting that for his "humanitarian efforts" the society "Opera Educativa pacifica" in Rome had granted him a diploma and placed his publications in the celebrated "Bibliotheca Marciazzi." Dr. Kantor, editor of the *Gesundheitslehrer*, declared that, according to information received from the German Consulate in Rome, no such society existed there, and the library referred to probably was the Bibliotheca Marciana in Florence, which, like other public libraries, accepts all donations without critical examination. To offset these exposures, the promoter of Antidiabeticum published advertisements libeling Dr. Kantor and attacking the Society for Suppression of Quackery. This resulted in suits and counter-suits for libel between Dr. Kantor and the directors of the antiquackery society on the one side and the promoter of Antidiabeticum on the other. As a result of the recent combined trial, the court declared that Dr. Kantor's charges had been substantiated and the manufacturer of Antidiabeticum was fined 600 marks or forty days' imprisonment, while apparently on purely technical grounds Dr. Kantor was fined 50 marks or five days' imprisonment. The costs were divided between Bauer and Dr. Kantor in the proportion of 11 to 1. As Bauer in the course of the trial made further libelous charges, Dr. Kantor has lately started new proceedings against Bauer. The incessant persecution of Dr. Kantor was described in an editorial in THE JOURNAL, May 20, 1911, p. 1486.

The persecution of Dr. Kantor previously described shows no signs of abatement nor has Dr. Kantor given evidence of loss of courage. Some of the German medical societies have subscribed for the *Gesundheitslehrer* for each of their members. It is written in popular style for the masses and is a sharp and effective weapon for the campaign against quackery.

PHENACETIN, SULPHONAL AND TRIONAL

Report of the Council on Pharmacy and Chemistry, Holding These Names to be Non-Proprietary

The following report of the Committee on Patents and Trademarks was adopted by the Council and the descriptions in New and Nonofficial Remedies, 1912, have been modified as directed in the report. W. A. PUCKNER, Secretary.

REPORT OF THE COMMITTEE ON PATENTS AND TRADE-MARKS

Recently the Council voted to list lanolin in "New and Nonofficial Remedies" as a synonym for adeps lanæ hydrosus, its pharmacopeial name. This action was in accord with the

1. According to a report in the *Allgemeine medizinische Central-Zeitung*, Jan. 6, 1912, p. 14

generally recognized principle that the name used by a patentee to designate a patented article becomes the common name of such article after the patent has expired. This principle, and also the principle that a generic title—or common name—cannot be legally continued as a trade-mark, have been generally recognized and are thoroughly well established by decisions of the courts.[1]

So far as medicines are concerned, the same principles have been directly established by a decision of the Supreme Court of the state of New York in the lanolin case.[2]

Your committee believes it important that the medical profession know the facts regarding this subject of names of patented articles, namely, that when the patent expires, the name of the article becomes public property, provided the name has been generally used for the article. Besides adeps lanæ hydrosus or lanolin, there are three preparations in the U. S. Pharmacopeia that come in this category, all of which have been widely used under the proprietary names given by the patentees. These are acetphenetidin, sulphonmethane and sulphonethylmethane, sold, respectively, under the names phenacetin, sulphonal and trional. The patents on these products having expired, anyone can make and sell them. They are now official in many foreign pharmacopeias, with direct or indirect recognition of their trade names in practically all.

It is evident that the names "phenacetin," "sulphonal" and "trional" have become generic designations for the several products to which they have been applied.

Therefore, it is recommended that the present descriptions for these articles in New and Nonofficial Remedies be modified to indicate more clearly that the names "phenacetin," "sulphonal" and "trional" are synonyms for the official titles acetphenetidin, sulphonmethane and sulphonethylmethane, respectively, and that the tests of identity and purity prescribed in the U. S. Pharmacopeia should apply to the products dispensed under these titles.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

BLACKENING OF THE SKIN BY GOLD CHAIN

To the Editor:—Why should a 10-carat gold chain blacken a person's neck? One of my patients complains of this and came to me for advice. I have made inquiries of jewelers and find that this is a rather common occurrence among certain people. A jeweler says the fineness of the chain has little effect, a 10- and 14-carat having the same effect. In the case of my own patient I have been careful to exclude the various powders used by women, which often contain zinc, bismuth and other metals, also the taking of iron or sulphur. Could an early case of pulmonary tuberculosis have any effect? I believe this case is of that character. A peculiar thing about the case is that other members of my patient's family are said to wear the chain without causing the slightest mark; also, the patient wears rings and bracelets without the discoloration.

SUBSCRIBER.

ANSWER.—On a casual examination of books and literature, we fail to find any record of a scientific investigation of this question, but such a discoloration could easily be caused by the formation of a sulphid of copper. Ten-carat gold may contain about 60 per cent. of copper while more or less sulphur is commonly present in the air in the form of hydrogen sulphid. It comes from coal-gas and from the decomposition of animal and vegetable matter.

Another suggestion: It is a common observation that hard-rubber objects will blacken silver and gold because of the sulphur which was used in the vulcanizing of the rubber and which escapes gradually in the form of hydrogen sulphid. It may be found that this patient has some toilet article—a hair-brush or a nail-file, for example, with a composition rubber handle—which is near the chain over night, and the resultant discoloration rubs off on the neck.

As to the alleged difference between this patient and other members of the family, this may not be true, or there may be something peculiar in the secretion of the skin in this person, which favors the action of the sulphur, or some other conditions might be found as the cause if it were worth while for a thorough observer to study into the matter. These remarks are largely in the nature of speculation, because there are so many undetermined factors in the problem presented, but some of the suggestions may be helpful to our correspondent.

If any of our readers know of any authoritative statement on this subject, we shall be glad to forward the information.

PITUITARY EXTRACTS IN PHYSICAL AND MENTAL BACKWARDNESS

To the Editor:—Please give me a list of articles dealing with the use of the extract of the anterior lobe of the pituitary body in physical and mental backwardness. A. L. P.

ANSWER:

Cushing, H.: Functions of the Pituitary Body, *Am. Jour. Med. Sc.*, April, 1910; abstr. in THE JOURNAL, April 30, 1910, p. 1477.
Franchini, G.: Functions of the Hypophysis and Action of Experimental injection of Its Extract, *Berl. klin. Wchnschr.*, April 18, 1910.
Cross, E. S.: Hypopituitarism, *New York Med. Jour.*, Oct. 15, 1910.
Dunan, T.: Rôle of Hypophysis Cerebri in Nutrition, *Presse. méd.*, April 19, 1911; abstr. in THE JOURNAL, May 27, 1911, p. 1621.
Cushing, H.: The Hypophysis Cerebri, THE JOURNAL, July 24, 1909, p. 249.
Hypophysis Cerebri, Editorial, THE JOURNAL, July 24, 1909, p. 302.

ANTIFORMIN

To the Editor:—In THE JOURNAL (April 6, 1912, p. 1005) appears an article entitled "The Value of the Loeffler Method of Sputum Examination," in which reference is made to the use of antiformin. Please inform me where this substance can be obtained.

F. B. NATHER, Spokane, Wash.

ANSWER.—See New and Nonofficial Remedies, Ed. 1912, p. 30. Antiformin is made by the American Antiformin Co., and can be obtained through the drug trade.

TRIPLETS LIVING AT 68

To the Editor:—In reply to an inquiry made by J. F. Leys, U. S. Navy, Newport, R. I. (THE JOURNAL, April 13, 1912, p. 1136), as to whether there are any triplets now living at 70 years of age, I will say that there are triplets, born June 9, 1844, a sister and two brothers, named Windecker, now living in Fond du Lac, Wis. About twelve years ago I operated on Sidney Windecker for cataract. The triplets are not quite 70, being 68, but the difference is so slight as to justify this reply. DR. G. N. BRAZERN, Racine, Wis.

LOW HEMOGLOBIN CONTENT AND RECOVERY

To the Editor:—Dr. Barron asks (THE JOURNAL, March 23, p. 880) if recovery can take place after the hemoglobin falls to 10 per cent. or less. It may be of interest to him and others that I found, two years ago, in looking over the records of the extra-uterine pregnancy cases at the Massachusetts General Hospital, a case in which the hemoglobin was only 9 per cent. The pulse was 130 and the temperature 100; white count, 25,000. The record stated that many quarts of blood were free in the abdomen. This patient made a perfect recovery, with no postoperative complications.

W. PEARCE COUES, M.D., Boston.

The Public Service

JOURNAL Announcements, Knocks and Boosts, Books Received and changes in the Public Service will be found in the advertising section, commencing on the second page following reading matter.

1. For example, the frequently quoted Singer Sewing Machine case may be mentioned. This case was decided by the U. S. Supreme Court (per Justice White, May 8, 1896), on appeal from decree of Circuit Court of U. S. for Northern District of Illinois. The following is an extract of the decision (163 W. S. 169): It is the universal American, English and French doctrine "that where, during the life of a monopoly created by a patent, a name, whether it be arbitrary or be that of the inventor, has become, by his consent, either express or tacit, the identifying and generic name of the thing patented, this name passes to the public with the cessation of the monopoly which the patent created." . . . The decision emphasizes, of course, that the defendant must not carry on unfair or deceptive competition in business. The principles laid down above are further emphasized by the opinions recorded in Green Tweed & Co. v. Mfgs. Belt Hook Co. (158 F. R. 640).

2. Jaffe et. al. v. Evans & Sons, limited, N. Y. State Rep., Vol. 109, Suppl. 75, p. 257, THE JOURNAL A. M. A., Sept. 9, 1911, lvii, p. 906.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF POST-GRADUATE WORK, CONTRACT PRACTICE, LEGISLATION, MEDICAL DEFENSE, AND OTHER MEDICOLEGAL AND ECONOMIC QUESTIONS OF INTEREST TO PHYSICIANS

DEBATE IN THE SENATE ON THE OWEN BILL

The Owen bill came in for a brief but illuminating discussion in the Senate, Tuesday, April 16. Senator Jones, of Washington, arose and read a selection of telegrams, which he evidently assumed were representative of public sentiment in his state. Senator Owen, Senator Works and Senator Smoot also took a hand in the discussion. The extract from the *Congressional Record*, given below, is commended to the careful attention of all our readers and particularly to the physicians of the state of Washington. Are they willing to admit that the five telegrams read express the sentiment of a majority of the people of the state? If not, then it would be well to have Senator Jones informed as to what is the real sentiment of his constituents.

DEPARTMENT OF PUBLIC HEALTH

Mr. Jones: Mr. President, I have some telegrams in the nature of petitions which I desire to present. I want to say, in connection with the matter that has already been referred to, that I have received a great many telegrams indorsing the compensation act proposed from my state. My people, however, are much interested in another proposition that appears, to them at least, to be very serious, it bearing the honored name of the senator from Oklahoma (Mr. Owen). While I know he is a "progressive," and I am satisfied he would not take away the liberties of any of our people, a great many of my people are rather fearful. I want to read one telegram I have received, which reads as follows:

> Vote in favor of the Owen bill means the establishment of one of the worst trusts in our country; its defeat means that we can still choose our own physician and our own medical school. We don't want any interference with our present vested rights of freedom.
> W. ELWANGER.

This feeling seems to have spread considerably among my people. I have another telegram from Seattle, which reads as follows:

> Please use every available effort to defeat the Owen bill. It is fraught with great danger to the liberty of every American citizen. Medical freedom will be gone if any one particular school has a monopoly. Medical monopoly is the mainspring of the Owen bill.
> R. COOPER WILLIS.

Then, also from Seattle—I take it that possibly to-morrow I will get a great many similar telegrams from some other locality in the state—I have the following telegram:

> The world is sound and moving on. Modern physiologic pathologists by sheer merit are rapidly supplanting allopathic pretensions. In desperation allopaths are seeking to recover prestige through gag legislation and state medicine crushing with ignorant force on enlightened and aspiring people. For sake of truth and humanity, kill Owen bill.
> DOCTOR P. RUDOLPH.

I also have a telegram from Spokane, as follows:

> The passage of the Owen bill as amended will deprive many of your best people of freedom.
> GEO. T. CRANE.

The ladies of my state are also getting fearful of this reactionary measure of my friend from Oklahoma. They say:

> We look to you for the protection of our individual and national rights, hence the defeat of the Owen bill.
> MRS. MICHAEL EARLES.

Mr. Owen: Mr. President——

Mr. Jones: I want to ask the senator, before he interrupts, whether it is his intention seriously to press this trust-breeding, monopolistic, liberty-destroying, tyrannical, reactionary measure against the wishes of the people of my state. I have a great deal of confidence in his liberty-loving proclivities, but I do feel that in the matter of legislation, at least, I should pay some regard to the views of my people.

I have a great many more telegrams from people in my state with reference to this matter which I desire to submit, and I should like to know whether the senator from Oklahoma seriously intends to press this measure which is fraught with so much danger to the people of my state.

Mr. Owen: The bill itself abundantly answers the telegrams which have been read, and for the information of the senator from Washington I will call his attention to this provision of the bill:

> That the health service established by this act shall have no power to regulate the practice of medicine or the practice of healing, or to interfere with the right of a citizen to employ the practitioner of his choice, and all appointments made within the health service, including the head of the service, shall be made without discrimination in favor of or against any school of medicine or of healing.

The bill provides further that no domicile or residence of a person shall be entered without the consent of the occupant; that no function belonging exclusively to the state shall be exercised by the department.

The opposition to this measure is inspired in large measure, in my opinion, by the same forces that have opposed the carrying out of the pure food and drug act in this country and by those who are engaged in disseminating patent medicines and who have a good deal of money invested in that business.

They have stirred up innocent people, such as the Christian Scientists and some few members of the eclectics or the chiropractics or other citizens who imagine that their right to practice medicine or the healing art may be interfered with.

Those artificial telegrams which are sent here—artificial in the sense that they are instigated by a private interest—serve no useful purpose except, perhaps, to confuse the minds of those who do not understand what it really means.

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I will say to the senator from Washington that, so far as I am concerned, I do intend to press Senate bill No. 1 and to do whatever I can to establish a Department of Health in this country that shall make available, as far as possible, all the information acquired by the scientific world in regard to the preservation of human life.

I remind the senator from Washington that it was the investigation of Carroll, of Lazear, and of Agramonte and the other patriots of peace, a number of whom lost their lives in solving the problem of yellow fever at Havana, where the death-rate was over 649 to the hundred thousand prior to the American occupancy, and rapidly fell to zero, which made possible the building of the Panama Canal, which the French nation had been unable to build because of yellow fever and because of the Chagres fever.

I should like to know if in reality the senator from Washington is opposed to the principle of this bill or whether he is merely diverting himself by reading these telegrams.

Mr. Jones: I wish the senator from Oklahoma to know what my people think about this measure. I have not myself examined it very thoroughly, and am not now proposing to express any judgment with reference to it. I am glad to have the senator's suggestion with reference to how these telegrams happened to come here. These people are certainly somewhat interested in the matter, because they paid at least a dollar apiece to get the telegrams here. So it is something serious to them. I do think on a matter of legislation—what it is wise to do in a legislative way here I should defer to the expression of opinion of my people, and these are the only expressions I have had in this way.

All these telegrams came in this morning. During the last session of Congress I got a great many telegrams of the same character. So that however they were inspired, and whoever brought about these telegrams, they must represent the sentiments of these people and their fears; and I am glad to have the assurance of the senator from Oklahoma that he does not intend to deprive these people of their liberty and their freedom and that this is a good and meritorious measure. I assure him I shall look into it very carefully indeed, and if the results, after having done so, convince me that it is all that the senator says it is, I shall possibly vote for it.

Mr. Owen: I ask the senator from Washington if he is in favor of an independent health service in the United States or not?

Mr. Jones: That is a matter I want to look into very carefully, having due regard for the views of my people.

Mr. Owen: In other words, I understand the senator from Washington to say that after this matter has been before the public three years actively, he has not made up his mind on it?

Mr. Jones: No; the senator does not understand me to say anything of the kind.

I have views on the general subject, but I have not been able to examine the particular features of the bill, and I do not desire, therefore, at this time to commit myself to any particular measure.

Mr. Owen: I will ask the senator from Washington if he recalls the language of the republican national platform on this question.

Mr. Jones: Oh, yes; and I am a little bit surprised that, progressive as he is, the senator finds something in the republican platform which meets his approval. That to me is a little suspicious.

Mr. Owen: I am unable to determine from anything the senator says whether he is in favor of an independent health service or not, and I am willing to leave it in the *Record* that way if he is.

Mr. Works: Mr. President, I suppose I am one of the innocent individuals who have been misled into the belief that this is undesirable legislation. I think I know pretty well the contents and the meaning of this bill and the forces that are behind it. I happen to be a member of the Committee on Public Health and National Quarantine, and I have given the bill a good deal of study.

A good many of the objectionable parts of the bill have been eliminated, and every effort has been made to make it just as innocent as possible. Nevertheless, it is a part of a system of legislation that is going on all over this country which is intended to establish a state medicine, and to place all the medical activities of the government in the hands of one school of medicine; and this effort is properly characterized in the telegrams which have been read here in the Senate.

This particular bill is not so harmful in itself, but it is a part of the entire system of legislation about which we are complaining. I am not now going to discuss the merits of the bill. I expect to do so at the proper time when the bill comes before the Senate for consideration.

I desire to say in this connection, however, that it has been stated all over this country, just as it has been now stated on the floor of the Senate, that the opposition to this bill has been instigated and carried on by the patent-medicine men, and that other innocent people have been brought to believe it is harmful. That is an entire mistake, and in some quarters it is maliciously stated. The opposition to the bill is not carried on by the patent-medicine men. I do not know whether they are opposing it or not, but I know that the League for Medical Freedom, which comprises most of the opposition to the bill, has nothing to do with patent-medicine men. They have absolutely refused to accept any money from them. They are acting independently. Of course it is natural that the Christian Scientists, against whom most of this legislation is directed and who, in some of the states, under legislation now in force, are being prosecuted and imprisoned for carrying on their mode of healing, should stand opposed to legislation of this kind, and they are doing it consistently and in good faith.

The physicians of other schools of medicine are making the same opposition to it on precisely the same grounds—that their liberty to practice their mode of healing, and the right of the people to resort to them for healing, will be affected by this legislation, if it is carried out as it is intended, not as appears on the face of the bill, but as it will be carried out and enforced throughout this whole country by legislation of this kind.

I am only saying this in order to attract the attention of the Senate to the fact that whatever objection is made to the bill, and which will be made on the floor of the Senate, will be made in good faith, without any selfish interest on the part of the patent-medicine men or anybody else.

Mr. Smoot: Mr. President, in this connection I want to say that on March 22, 1912, I introduced a bill to establish a public-health service, and for other purposes, and when Senate bill No. 1 is up for consideration before the Senate, I intend to offer my bill as an amendment to the one reported to the Senate.

I will say that the bill provides that the Public Health and Marine-Hospital Service and all the other health agencies of the government shall be put into the public-health service, and it will be under the Secretary of the Treasury, as the Public Health and Marine-Hospital Service is to-day. There will be provided an assistant to the Secretary of the Treasury, whose duty it shall be to preside over this service.

I desire to say that it will reach the same result, in my opinion, as the bill introduced by the senator from Oklahoma will reach. It will not entail another organization or another department, an independent department, and so far as the expense is concerned, there are only two additional employees from those in the public service to-day.

I sincerely trust that the Senate will compare the two bills and the organizations provided, and what is to be accomplished by the two, and I shall, as I said, offer this as a substitute for Senate bill No. 1 when it is up for consideration.

The Vice-President: The telegrams will lie on the table.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

Ninth Month—Second Weekly Meeting

ACUTE YELLOW ATROPHY OF LIVER[1]

ETIOLOGY: Age, sex, pregnancy. Syphilis, toxic agents, chloroform.[2]

PATHOLOGY:[3] Gross changes, size, color. Microscopic changes in lobules, cells, ducts. Changes in other organs.

SYMPTOMS: Onset, clinical history, nervous symptoms, hemorrhages, physical examination, urine. Prognosis.

CARCINOMA OF BILE PASSAGES

GALL BLADDER: Type, extension, secondary deposits. Casual relation of gall-stones.

BILE DUCTS: Types, primary and secondary effects.

INFECTIONS OF THE BILIARY TRACT[4]

BACTERIOLOGY: Organisms usually found. Various changes occurring as result of *Bacillus typhosus* infection; of *Bacillus coli* infection.

1. White: Boston Med. and Surg. Journal, 1908, clviii, 729. Tileston: Boston Med. and Surg. Jour., 1908, clviii, p. 510.
2. Wells: Archives of Internal Medicine, 1908, i, 589.
3. McCallum: Johns Hopkins Hospital Reports, 1903, x, 375.
4. Kelly: Am. Jour. Med. Sciences, 1906, cxxxii, pp. 446 and 744.

PATHWAYS OF INFECTION: (a) From duodenum by diverticulum of Vater and common duct; (b) portal circulation; (c) systematic circulation; (d) lymphatic circulation; (e) directly through wall of gall-bladder from peritoneum.

ACUTE CATARRHAL CHOLANGEITIS (CATARRHAL JAUNDICE)

ETIOLOGY: Age, sex, gastro-intestinal disorders, infectious disorders, bacteria present.

SYMPTOMS.

SUPPURATIVE CHOLANGEITIS

ETIOLOGY: Previous diseases, microörganisms usually found.

SYMPTOMS: Indefinite previous history. Insidious onset. Jaundice, constitutional symptoms. Local symptoms.

PROGNOSIS.

ACUTE CHOLECYSTITIS

Differentiate clinically the following varieties: Catarrhal, suppurative, phlegmonous, gangrenous, membranous.

CHRONIC CHOLECYSTITIS

Pathologic changes in wall. Incidence of gall-stones. Symptoms.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

ARKANSAS: Regular, Little Rock, May 14. Sec., Dr. F. T. Murphy, Brinkley.

FLORIDA: Regular, Jacksonville, May 7-8. Sec., Dr. J. D. Fernandez; Eclectic, Jacksonville, May 6-8. Sec., Dr. Hiram J. Hampton, Tampa.

GEORGIA: Regular, Atlanta, May 1-4. Sec., Dr. C. T. Nolan, Marietta; Homeopathic, Atlanta, May 8. Sec., Dr. R. E. Hinman, 106½ Whitehall Street, Atlanta.

ILLINOIS: Coliseum Annex, Chicago, April 30. Sec., Dr. James A. Egan, Springfield.

LOUISIANA: Regular, Tulane University, New Orleans, May 30 to June 1. Sec., Dr. A. B. Brown, 108 Baronne Street; Homeopathic, New Orleans, May 6. Sec., Dr. Edward Harper, 702 Maccheca Bldg.

MASSACHUSETTS: State House, Boston, May 14-16. Sec., Dr. Edwin B. Harvey, State House.

MISSISSIPPI: State Capitol, Jackson, May 14. Sec., Dr. W. W. Smithson.

NEBRASKA: Senate Chamber, State House, Lincoln, May 22-23. Sec., Dr. C. P. Fall, Beatrice.

NEVADA: Carson City, May 6. Sec., Dr. S. L. Lee.

NEW YORK: May 14-17. Chief of Examinations Division, Mr. Harlan H. Horner, Department of Education, Albany.

TENNESSEE: Memphis, Nashville and Knoxville, May 1-2. Sec., C. A. Abernathy, Pulaski.

WISCONSIN: Milwaukee, May 28-30. Sec., Dr. J. M. Beffel, 3200 Clybourn Street.

Connecticut Homeopathic and Eclectic March Reports

Dr. Edwin C. M. Hall, secretary of the Connecticut Homeopathic Examining Board, reports the written examination held at New Haven, March 12, 1912. The number of subjects examined in was 7; total number of questions asked, 70; percentage required to pass, 75. The total number of candidates examined was 2 both of whom passed. The following colleges were represented:

College	PASSED Year Grad.	Per Cent.
Hahnemann Med. College and Hospital, Chicago.	(1910)	77
New York Homeo. Med. College and Hospital...	(1902)	84

Dr. T. S. Hodge, secretary of the Connecticut Eclectic Examining Board, reports the written examination held at New Haven, March 12, 1912. The total number of subjects examined in was 11; total number of questions asked, 110; percentage required to pass, 75. Only one candidate was examined, a graduate of the Eclectic Medical College of the City of New York, 1910, and he passed with a grade of 90.

Utah April Report

Dr. G. F. Harding, secretary of the Utah State Board of Medical Examiners, reports the written examination held at Salt Lake City, April 1, 1912. The number of subjects examined in was 19; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 5, including one osteopath, all of whom passed. Five candidates were licensed through reciprocity. The following colleges were represented:

College	PASSED Year Grad.
Rush Medical College	(1912)
Northwestern University Medical School	(1911)
St. Louis University	(1909)
University of Pennsylvania	(1911)

LICENSED THROUGH RECIPROCITY

College	Year Grad.		Reciprocity with
Denver College of Medicine	(1893)		Colorado
Rush Medical College	(1887)	Wisconsin;	Idaho
Michigan College of Medicine and Surgery	(1894)		Idaho
Lincoln Medical College	(1902)		Nebraska

Book Notices

THE PRINCIPLES OF SANITARY TACTICS. A Handbook on the Use of Medical Department Detachments and Organizations in Campaign. By Edward Lyman Munson, A.M., M.D., Major, Medical Corps, United States Army. Cloth. Price, $2. Pp. 306. U. S. Cavalry Association, Fort Leavenworth, Kan.

A STUDY IN TROOP LEADING AND MANAGEMENT OF THE SANITARY SERVICE IN WAR. By Major John F. Morrison, General Staff, U. S. Army, and Major Edward L. Munson, Medical Corps, U. S. Army. Cloth. Price, $1.25. Pp. 245. U. S. Cavalry Association, Fort Leavenworth, Kan., 1910.

The amateur military surgeon, however great his patriotism or sincere his desire to become proficient in the military practice of his profession, is at a great disadvantage as compared with his professional brother of the regular establishment who has made a life study of the subject. There has been a great dearth, also, of information for the volunteer or militia surgeon, save in army regulations and the knowledge contained in general orders or in text-books by officers of the regular establishment, and in severely technical monographs by officers of the Medical Corps in the periodical literature.

The excellent work of Colonel Straub was the first to give information in understandable form to the volunteer military surgeon. The valuable books of Munson and Morrison, now at hand, have been adopted by the government as text-books and are in general use by officers of the Medical Corps and line of the army and organized militia. Their purpose is not so much to discuss the treatment of casualties received in battle, as to show the best methods under the military system by which military experience, medical supplies and hospitals may be brought in contact with the injured with the least difficulty and delay, and in the interest of both humanity and military efficiency. The difficulty of having surgical relief available at the right time and place has, in every war, resulted in a vast amount of needless suffering and mortality.

Morrison and Munson's "Study in Troop Leading" has been developed from one of the problems prepared for study at the army school of the line. It illustrates, under assumed conditions of battle, the leading of troops and the management of a sanitary service coordinate therewith. The general situation is first discussed and then the special tactical situation, as it develops throughout the maneuver, detailing the sanitary arrangements, sanitary administration, methods of the sanitary service on the battle field, disposal of the dead, the sanitary line of communication, etc. It describes briefly, and yet with great clearness, the inter-dependent operations of the tactical and sanitary mechanism of a large military unit in modern war.

In this "Principles of Sanitary Tactics" Major Munson seeks to clear up the hazy conception which exists in the minds of many officers in the line and medical department as to the important scope and methods of the sanitary service with troops in campaign. Much suffering has heretofore been caused by ignorance and indifference regarding these matters. The information previously obtainable on this subject was not standardized and was in great measure difficult of apprehension by the untrained volunteer surgeon; the need for such a work has therefore been urgent. This work standardizes instruction regarding sanitary tactics, both for the individual and group, in garrison, armory, maneuver camp and war. The prelim-nary

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chapters deal with the general subjects of the organization of the sanitary service, the tactical education of medical officers, the solution and preparation and problems of sanitary tactics, and the participation by medical officers in war-games, terrain exercises, tactical walks and rides, and field maneuvers. This is followed by thirty-five problems, which are worked out and are grouped under the heads of visibility problems, sanitary tactics with the detached battalion and squadron; the detached regiment; the reenforced brigade and the infantry division, those leading the student from the battalion unit by gradual steps to the division.

These books cannot be too highly commended for use and study by both medical and line officers, not only of the organized militia, but of the regular establishment.

A HANDBOOK OF HEALTH. By Woods Hutchinson, A.M., M.D. Cloth. Price, $1.25. Pp. 330. Boston: Houghton Mifflin Company, 1911.

The author has endeavored to set forth in non-technical language something of the anatomy and physiology of the human organism and the best method of keeping it in a healthful condition. He discusses the various subjects connected therewith in his usual graphic style, so familiar to the reading public through his magazine articles and books. The book, for the most part, treats the subjects in an elementary and figurative manner and can be easily understood by the ordinary layman. Hutchinson calls the body the human automobile and then discusses the various varieties of fuel in the form of food, which help to keep the engine going. He likens the heart to a pump and the vessels to a pipe-line system and discusses their care. The lungs constitute a bellows and need pure air to keep them free from colds, consumption and pneumonia. He tells how to keep the wonderful coat—of the skin—healthy, by clothing, baths, bathing, etc. He discusses the plumbing and sewering of the body, the muscles, the stiffening rods of the body machine (bones) and tells how to get and keep a good figure. The nervous system constitutes a telephone exchange and its cables. The lookout department consists of the nose, tongue, eye and ear. Among the other subjects discussed in an understandable way are exercise and growth, the speech organs, the teeth, infections and how to avoid them, accidents, emergencies, etc. This book should be of interest to the layman of any age, and if widely read would undoubtedly bring about better hygienic and sanitary living. It can be commended as valuable in the health education of the public.

PRACTICAL GYNECOLOGY. A Comprehensive Text-Book for Students and Physicians. By E. E. Montgomery, M.D., LL.D., Professor of Gynecology, Jefferson Medical College. Fourth Edition. Price, $6. Pp. 857, with illustrations. Philadelphia: P. Blakiston's Son & Co., 1912.

The arrangement of this book has been changed somewhat to meet the demands of modern medical pedagogy. It opens with special anatomy, followed in order by physiology, etiology, diagnosis, therapeutics, functional disorders, malformations, traumatisms, inflammations, displacements, ectopic gestation and genital tumors. Special emphasis is laid on the influence of constitutional conditions and the importance of treatment from the medical side. The latter cannot fail to be beneficial because of the too prevalent desire to operate for many conditions which do not require operation. The text has been revised, many new illustrations have been added, and the number of pages increased. The excellency of the text is as great as in the previous editions. The author's views on gynecologic questions are so well known that it is not necessary to detail them here. The book enjoys a deserved popularity.

CONDUCT AND ITS DISORDERS BIOLOGICALLY CONSIDERED. By Charles Arthur Mercier, M.D., F.R.C.P., F.R.C.S., Physician for Mental Diseases to Charing Cross Hospital. Cloth. Price, $3.25 net. Pp. 377. New York: Macmillan Co., 1911.

According to the author—and we have no grounds for disputing his statement—this book is the first to work this field. Although of the making of books there is no end, and although conduct is what every man from Adam down has been engaged in from birth to death, still Mercier says, "there is not in existence, curiously enough, any comprehensive study of conduct as a whole." Although many departments of conduct are described in various books, none covers the general field of human activity. Mercier's treatment of the subject is comprehensive; from the analysis of the spider's actions—part instinctive and predetermined and part circumstantial and variable—up to the most complex web of emotions controlling man's most involved activities, the reader follows Mercier up a flight of steps, from various points of which he may calmly survey and dissect all the events of human history. Along this path he finds new lights thrown on play, work, incentive, motive, deceit, conceit, morality, modesty, emulation, duty. The teacher and the psychologist will be especially interested in the author's shrewd phraseology and helpful viewpoint. The style is clear, the presentation systematic, and the analysis incisive—indeed the work comes near being arbitrary and academic in its definitions.

The British publishers who printed the book used a lightweight paper so that the volume is not heavy—a feature to be commended to many American publishers—but they failed to trim the pages! Having a full equipment of printer's machinery, we sent the volume down stairs and had the edge trimmed—but what shall the average reader do? A plodding bibliophile may like to cut pages as he reads—but the poor, busy practitioner, who has to pick the book up at odd moments—for him we shed a tear.

DISEASES OF THE STOMACH. A Text-Book for Practitioners and Students. By Max Einhorn, M.D., Professor of Clinical Medicine at the New York Post-Graduate Medical School and Hospital. Fifth Edition. Cloth. Price, $3.50 net. Pp. 531, with 112 illustrations. New York: William Wood & Co., 1911.

The fourth edition of this book was reviewed in THE JOURNAL, March 23, 1907. In addition to having undergone a thorough revision of the matter previously contained in it, the book has in the present edition a much more extended presentation of the methods of *x*-ray and radium diagnosis of stomach conditions, which are illustrated by numerous plates. The use of mechanical means of diagnosis, such as the gastro- and duodenal diaphane, the duodenal bucket and the esophagogastroscope, is also more fully set forth. The book continues to be an admirable presentation of stomach diseases by one who has given years of study to this important subject.

CLINICAL IMMUNITY AND SERODIAGNOSIS. By A. Wolff-Eisner, M.D. Translated by Ray W. Matson, M.D., Professor of Histology, North Pacific College of Dentistry and Pharmacy, Portland, Ore. Cloth. Price, $2.50. Pp. 184. New York: William Wood & Co., 1911.

This book presents clearly and concisely the various theories and underlying principles of immunity and is sufficiently comprehensive in scope to enable the general worker, for whom it is intended, to become familiar with the subject. It is, of course, technical in character, but this cannot be avoided. It is to be commended to those who wish to gain a general knowledge of the advances in this great field of medicine. The translation is clear and accurate.

ZAHNÄRZTLICHE CHIRURGIE. Von Prof. Dr. Med. Fritz Williger, Direktor der Chirurgischen Abteilung des Königlichen Zahnärztlichen Universitäts-Instituts zu Berlin. Second Edition. Paper. Price, 4.50 marks. Pp. 142, with illustrations. Leipsic: Werner Klinkhardt, 1911.

This work is made up of clinical material, including the experiences of the author, in the care of each patient. It contains a wealth of information in regard to tumors, abscess, necrosis and osteomyelitis of the face and jaws. There are 112 illustrations showing the etiology, pathology and treatment of each patient.

A MANUAL OF PATHOLOGY. By Guthrie McConnell, M.D., Professor of Pathology and Bacteriology, Temple University, Medical Department, Philadelphia. Second Edition. Flexible Leather. Price, $2.50 net. Pp. 531, with illustrations. Philadelphia: W. B. Saunders Co., 1911.

The excellence of the first edition has been maintained in the revision. The record of knowledge is brought up to date, facts are clearly and correctly stated and presented in an orderly manner. The essentials of pathology are presented in a commendable manner. The book fulfills its pretensions of being a manual only.

Medicolegal

Board of Health Powers in Cases of Infectious and Contagious Diseases—County Must Pay for Disinfecting Buildings Not Quarantined

(Sawyer vs. Wapello County (Ia.), 133 N. W. R. 104)

The Supreme Court of Iowa reverses a judgment rendered in favor of the plaintiff, who was the duly appointed health officer of the local board of health of the city of Eldon, a part of whose charge was for disinfecting buildings in which there had been a contagious disease (measles), and where no quarantine had been maintained. The principal question presented was whether the county was liable for such service. It was conceded that the rules of both the state and local boards of health required disinfection in all cases where the plaintiff disinfected.

The county contended that it was not liable for disinfecting buildings after diseases where quarantine was not maintained, while the plaintiff contended that it was liable for disinfecting buildings where contagious diseases had existed, whether a quarantine was or was not maintained. The court takes the plaintiff's view on this point. It says that the first clause of section 2570a of the Supplement to the Iowa Code of 1907 clearly empowers the local board of health, in all cases of infectious or contagious diseases dangerous to the public health, to take charge of the person or persons so afflicted, and to take possession of the infected house or lodgings where they may be. It is further provided in the same clause that the local board shall make such provisions as are best calculated to protect the public from such diseases, and shall provide needful medical attendance, nurses, assistance and supplies. The medical attendance and other things enumerated shall be furnished at the residence of the diseased person, if, in the judgment of the board, it should be done; and it cannot be doubted that it is the duty of the board to make as complete provisions for the protection of the public where there is no removal to a pesthouse, as where there is such removal. The law does not absolutely require a quarantine. That is left to the discretion of the board of health, and it may take charge of the case and of the premises without in fact establishing a quarantine.

The section then provides further: "All bills for expenses incurred in carrying out the provisions of this section, and in establishing, maintaining or raising a quarantine, including disinfection, and the building and furnishing of any pesthouse," shall be paid by the county. To say that the charge for disinfection is to be allowed only in case of a quarantine is too narrow a construction of the statute.

The entire purpose of the statute is to protect the public from the evil effects of infectious or contagious diseases, and it is made the duty of the board of health to make such provisions as shall, in its judgment, best afford such protection, and to this end the board is given absolute control over the diseased persons, and over the premises they occupy at the time. The board may quarantine, or it may remove the person, if it sees fit to do so; but, whether it does so or not, it may control the person and premises, and, in the court's judgment, in any and all events, it is just as incumbent on the board to protect the public by the exercise of authority over the building as it is by the exercise of authority over the person.

It will not be claimed, the court apprehends, that the expense of medical attendance and the like is not chargeable to the county under section 2570a, where the board has assumed the control of such person; and if the board considers it necessary for the public welfare that the premises be disinfected, although no quarantine has been maintained, the court thinks the statute intended that the expense thereof should also be paid by the county. The statute leaves it with the board of health to determine what infectious or contagious diseases are a menace to the public health, and provides that the board shall also determine what steps shall be taken to best protect the inhabitants therefrom; and if, in the judgment of the board, it is wise to disinfect premises where no quarantine has been maintained it is clearly within its power to do so, and when it has done so the court thinks the expense of such service is chargeable to the county.

The evidence in this case clearly showed that there was a ratification by the local board after the plaintiff's service had been rendered; hence it was immaterial whether there was a prior contract. There was no evidence before the jury tending to show that disinfecting after measles was an unreasonable requirement on the part of the board of health, and the reasonableness or unreasonableness of the rule was not a matter for the consideration of the jury.

But there was a considerable conflict in the evidence as to the value of the services rendered by the plaintiff in disinfecting the buildings in question, for which he charged and was allowed $5 each, and the court thinks that the question should have been submitted to the jury, instead of a verdict being directed for the full amount of the plaintiff's claim. The testimony of men who had disinfected buildings at other times, under the direction of officers of the town, which showed that the service rendered by the plaintiff in that respect was not of the value claimed, was competent. It was true that these men were not physicians, nor experts in disinfecting, but their testimony showed what they had done, and the material they had used in the work, and the time taken, and the value of the material. If it was work that could be as well done by a non-professional, or non-expert, as by the plaintiff, the county was not bound to pay more than its reasonable value, no matter by whom it was done. The approval of the bill by the local board of health was prima facie evidence only of the value of the service, and it was for the jury to say what such value was, under the entire record.

Things Non-Experts May Testify to Concerning a Paranoiac—Moral Insanity and Insanity Defenses to Crime

(Banks vs. Commonwealth (Ky.), 141 S. W. R. 380)

The Court of Appeals of Kentucky affirms a conviction and sentencing to life imprisonment of the defendant Banks for homicide. His only defense was that at the time of the homicide he was afflicted with that species of insanity known as "paranoia," and therefore was not responsible for his act.

The court does not consider that it was error to permit non-expert witnesses, after giving evidence of their knowledge of the habits, conduct, and conversation of the defendant formed from an acquaintance and association with him, to be asked not only "if, in their opinion, he was a person of sound or unsound mind," but, also, "if, in their opinion, he had mind sufficient to know right from wrong." Without dealing in the refined or confusing distinctions of which the subject is capable, but treating it as a practical question in the administration of the criminal law, the court is unable to make any distinction between the legal effect that should be attached to the competency of a question involving the soundness of mind of the accused and a question involving his capacity to know right from wrong. If a person is of sound mind, as soundness of mind is commonly understood by non-expert witnesses, then he is capable of distinguishing between right and wrong, and should be held accountable for his acts. On the other hand, if he is of unsound mind, he should not be held legally responsible for what he does. Therefore, when a non-expert witness is allowed to express an opinion that the accused is of sound mind, there seems no reason why he should not also be permitted to express an opinion that he knows right from wrong. One opinion does not require more knowledge than the other, nor is one more than the other a usurpation of the functions of the jury.

Neither does the court think the opinion of the witnesses should be confined to the act under investigation or limited to the victim. Soundness of mind and capacity to distinguish between right and wrong was in this case, as it is in all others in which there is not a sudden or abrupt destruction or disturbance of the mental faculties, the result of a gradual growth. Nor must non-experts be excluded from testifying because paranoia is so peculiar a disease that no one but a medical expert who has made it a study can understand or portray it.

Certain instructions given the jury were complained of in that they did not submit for consideration the form or species of insanity on which the defense was predicated. Both legal and medical authorities recognize that there are varieties of insanity—the disease manifesting itself in different forms. But the prevailing legal rule, and the one adopted in Kentucky, is that insanity, whatever form it may assume, to be an excuse for crime must be the result of mental unsoundness. What is known as "moral insanity," defined to be "a morbid state of the affections and passions, or unsetting of the moral system, the mental faculties remaining normal and sound, an irresistible impulse to commit a criminal act coexisting with mental sanity," never obtained a foothold in this state, nor has it in any other.

While the law does not desire or demand that incapables shall be punished for violating its mandates, the frequency with which this often mysterious and always alarming mental state known as insanity is put forward as an excuse for crime makes it necessary for the protection of life that this defense should be as carefully guarded from abuse as its nature will permit. And, although medical writers are generally agreed that there is a well-defined disease called moral insanity, as distinguished from mental insanity as the latter is usually understood, the doctrine of moral insanity as a protection against punishment has been repudiated by all courts as dangerous to the safety of society.

Under the Kentucky practice, in every case in which the defense of insanity is made, the accused is allowed the widest latitude in bringing before the jury the peculiarities of the particular affection he is suffering with, whatever its technical name may be; but, when this is done, he must submit to the inexorable test that it is only unsoundness of mind as a result of mental disease that will save him from the consequences of his act.

Licensing Power of Boards of Health Limited

(M. L. Shoemaker & Co. vs. Board of Health of Gloucester City (N. J.), 81 Atl. R. 349)

The Supreme Court of New Jersey holds that boards of health have no power to require that wagons used for gathering and removing slaughter-house refuse and the like be licensed by them, and, further, that a license fee of $50 for each wagon engaged in gathering and removing slaughter-house refuse and the like is for revenue, and an exercise of the taxing power unwarranted by the statutory powers of boards of health. The court says that the nearest approach to such power conferred by the statutes of New Jersey is in the authorization of the board to regulate, control and prohibit the keeping or slaughtering of all kinds of animals, and the accumulation of offal and all decaying or vegetable substances; but these powers do not authorize the licensing of wagons to remove offal and the like. The method provided by the act of enforcing the ordinances of the board of health is by prescribing a penalty for their violation. When the legislature meant to authorize the board to license an employment, it said so in express language, as in the supplement of May 9, 1889, which authorizes it to license persons engaged in the business of cleaning cesspools and privies, and to require all vehicles used in the business to be approved by the board.

Gonorrhea of Eye Attributed to Accident

(Sullivan vs. Modern Brotherhood of America (Mich.), 133 N. W. R. 486)

The Supreme Court of Michigan affirms a judgment for the plaintiff for $260.40 accident insurance for the loss of an eye by gonorrhea. The court says that the plaintiff claimed that, while doing her family washing, with a washtub and washboard, and while washing some flannels, some water from the tub was accidentally splashed into her right eye; that she rubbed her eye at the time; that it became and continued painful, and that it became much inflamed; that she called a physician, who found the eye badly inflamed, and advised her to consult a specialist; that one took charge of the case, and very soon sent her to a hospital, where she remained between two and three weeks, and finally suffered the total loss of the eye. The physician diagnosed the case as inflammation of the mucous membrane of the eye caused by gonorrheal infection. The court cannot say as a matter of law that the plaintiff's testimony was so improbable, or that the presence of the germ in the water was so improbable or conjectural, that the case should not have been submitted to the jury. The evidence of the physician was to the effect that the sight of the eye was destroyed by inflammation due to gonorrhea; that gonorrhea of the eye could not be contracted unless there were gonorrheal germs brought into contact with it, and the splashing of the water as testified to by the plaintiff was the only explanation given. The court cannot say that the testimony was inconsistent with the theory that the injury was accidental. Nor can it hold that the court should have determined that the germ came into the eye in some way other than as claimed by the plaintiff. The case was one for the jury.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, Atlantic City, N. J., June 4-7.

American Academy of Medicine, Atlantic City, May 30-June 2.
Amer. Assn. of Genito-Urinary Surgeons, Philadelphia, June 7-8.
American Climatological Association, Hartford, Conn., June 10-12.
American Dermatological Association, St. Louis, May 23-25.
American Gastro-Enterological Association, Atlantic City, June 3-4.
American Gynecological Society, Baltimore, May 28-30.
American Laryngological Association, Atlantic City, May 9-11.
American Laryngological, Rhinological and Otological Society, Philadelphia, May 13-15.
American Medico-Psychological Association, Atlantic City, May 28-31.
American Neurological Association, Boston, May 30-June 1.
American Ophthalmological Society, Atlantic City, June 12-13.
American Orthopedic Association, Atlantic City, May 30-June 1.
American Otological Society, Atlantic City, June, 10-11.
American Pediatric Society, Hot Springs, Va., May 29-31.
American Society of Tropical Medicine, Atlantic City, June 3.
American Surgical Association, Montreal, May 29-31.
American Therapeutic Society, Montreal, May 31-June 1.
Arizona Medical Association, Bisbee, May 7.
Arkansas Medical Society, Hot Springs, May 13-16.
Association of American Physicians, Atlantic City, May 14-15.
Connecticut State Medical Society, New Haven, May 22.
Florida Medical Association, Tampa, May 8-10.
Illinois State Medical Society, Springfield, May 21-23.
Iowa State Medical Society, Burlington, May 8-10.
Kansas Medical Society, Hutchinson, May 1-2.
Maine Medical Association, Portland, June 12-13.
Massachusetts Medical Society, Boston, June 11-12.
Missouri State Medical Association, Sedalia, May 21-23.
Montana State Medical Association, Helena, May 8.
Nat. Assn. for Study and Prev. Tuberculosis, Washington, May 30-31.
National Association for Study of Epilepsy, Vineland, N. J., June 3.
Nebraska State Medical Association, Lincoln, May 7-9.
New Hampshire Medical Society, Concord, May 8-9.
New Jersey Medical Society, Spring Lake, June 11-13.
North Dakota State Medical Association, Valley City, May 8-9.
Ohio State Medical Association, Dayton, May 7-9.
Oklahoma State Medical Association, Shawnee, May 7-9.
Rhode Island Medical Society, Providence, June 12-13.
South Dakota State Medical Association, Mitchell, May 22-24.
Texas State Medical Association, Waco, May 7-9.
Wisconsin State Medical Society, Wausau, May 22-24.

AMERICAN UROLOGICAL ASSOCIATION

Eleventh Annual Meeting, held in New York, April 2, 1912

The President, DR. LOUIS E. SCHMIDT, Chicago, in the Chair

Officers Elected

The following officers were elected for the ensuing year: President, Dr. Granville MacGowan, Los Angeles; vice-president, Dr. J. Bentley Squier, New York; secertary, Dr. H. A. Fowler, Washington; treasurer, Dr. Homer G. Fuller, Washington.

The Phenolsulphonephthalein Test in Surgery of the Genito-Urinary Tract

DR. LOUIS E. SCHMIDT and DR. HERMAN L. KRETSCHMER, Chicago: It is our belief that the phenolsulphonephthalein test is the test of choice in preference to all other tests of this character. At the present time our decision in our

operative procedures is not reached from the result of this test, but by our physical examination and detailed clinical findings of all kinds, and in part by our experience. The drug has in all cases been introduced intravenously.

DISCUSSION

DR. JOHN T. GERAGHTY, Baltimore: The function of the kidney as determined by any of the present-day methods is nothing more than the function of that kidney at the time the test is made. It is impossible to predict what combination of circumstances may arise which would change entirely the function of that kidney. You cannot separate the renal function from that of other organs. Absorption necessarily plays a rôle. The intramuscular administration of the drug gives less variation than the subcutaneous. In all normal cases, following intravenous injection of the drug, the excretion is directly in proportion to the concentration of the drug in the blood. In diseased conditions, the kidneys are slow to take up this new work; consequently short observations may lead to error. For total functional estimations we use the intramuscular method. In unilateral estimations, however, we use the intravenous, and collect for two fifteen-minute intervals. From certain facts already known and from some experiments which we have carried out on frogs, we have been able to determine that this drug is excreted by the urinary tubules alone and not by the glomeruli.

DR. HUGH CABOT, Boston: We have continued to use this test since I last reported on it, and to me it has lost none of its advantages. We do not believe that supreme and complete dependence can be put on this or any other test. We have used the intravenous method in the catheter cases.

DR. HENRY L. SANFORD, Cleveland: We have used the intravenous method in the ureter catheter cases, and our experience has been that the amount of drug excreted in one-half hour with the intravenous method corresponds very closely to the amount excreted in one hour with the intramuscular method. There have been some cases in which the results have been difficult to interpret, but probably the results after operation were due to some influence outside the kidney. I think it is very important to consider other organs besides the kidney.

DR. BRANSFORD LEWIS, St. Louis: This test is very serviceable in showing improvement in renal elimination if employed successively in individual cases. I place much more reliance on it when used in that way than I do on the first reading in a given case.

DR. LOUIS HEITZMAN, New York: Why is it that at the present time not more time is devoted to the microscopic examination of the urine taken separately from the two kidneys? If we do that carefully we can learn infinitely more as to the condition of our patients than we can from purely functional tests.

DR. L. E. SCHMIDT, Chicago: The fact that some of us are interested in this line of work does not mean that we are particular admirers of any particular functional test, but I think it is our desire to develop a test that will be better than any of its predecessors. We all know perfectly well their shortcomings. I do not believe, neither does anyone else, that any one single test can prove the functional activity of the kidneys, but with the information we gain from a clinical study of the case, I believe we will be able to come to conclusions in the future far more accurately than without the use of this test.

Albumin Determination as an Aid in Diagnosis of Kidney Lesions

DR. GEORGE W. WARREN, New York: The albumin content in its relation to the amount of pus in the urine is the greatest gross aid in diagnosticating kidney infections. The albumin content in the most marked cases of cystitis does not exceed 0.15 per cent. Therefore, in pyuria of doubtful origin, where the urine is free from blood with an albumin content of more than 0.15 per cent., the kidney is involved in the great majority of cases. With a small amount of pus and an albumin content of 0.15 per cent. it can safely be assumed that the kidney is infected.

DISCUSSION

DR. E. E. SMITH, New York: I have employed this method in locating suppurative lesions. I have found that the greatest possibility of error has come between a prostatic abscess and a pyelitis; in other words, we are apt to find with the pus from the prostate more albumin than we will get with a cystitis.

DR. GUY L. HUNNER, Baltimore: On the whole, I quite agree with Dr. Warren's conclusions, and still I feel that we have to use the same judgment here as in the phthalein test if we are depending on the relationship of the amount of albumin to the amount of pus in helping us to settle the question as to whether we are dealing with a bladder or a kidney lesion.

The Effects of Ureteral Ligation: Experimental and Clinical

DR. J. DELLINGER BARNEY, Boston: Sudden and complete occlusion of one ureter may produce no symptoms whatever, and uninterrupted recovery may ensue in 21 per cent. of cases, but in the event of an injury to both ureters there is complete anuria in all, as is to be expected, whereas in the unilateral injuries suppression of urine occurred in only 1.6 per cent. Ureteral fistulas are developed in 24 per cent., their site depending on the nature of the operation. Where only one ureter is ligated, pain and tenderness in the kidney, usually subsiding spontaneously, is to be expected in 26 per cent. It has not been found in cases of bilateral injury. Infection of the kidney produced by the injury to the ureter, or aggravated by it, and necessitating subsequent nephrectomy, occurred in 15 per cent. Both ureters may be clamped for as long as seventy-two hours with complete recovery after removal of the obstruction, whereas one ureter may be completely blocked for ten days without destroying the integrity of the kidney. Of fifteen patients in whom the subsequent condition of the kidney was investigated, hydronephrosis was observed in 80 per cent., but in no case was this of more than moderate size. In the remainder there was said to be no change in the condition of the kidney. The mortality of bilateral occlusion of the ureter is found to be 33.3 per cent., whereas in unilateral occlusion it is 17.8 per cent., but in both instances we must consider the influence of other factors, such as the previous condition of the patient, and the severity of the operation. Our investigation of this series of cases shows that there is strong probability that often a ureter is ligated without the fact being known, and that in the presence of postoperative anuria, and in the absence of localizing symptoms examination of each ureter by the cystoscope may be the only means of determining whether one or both ureters have been occluded.

The Time for Prostatectomy

DR. BENJAMIN TENNEY, Boston: The symptoms of prostatic obstruction may be grouped so as to mark off four stages of the disease. In the first stage there is difficulty or slowness of starting urine, and loss of speed and force in the stream. We do not know enough about the growth of hypertrophies in the prostate to advise radical treatment in this stage. In the second stage the daily calls to urinate grow more frequent, and the patient is wakened once or oftener at night. Examination at this time will show 50 c.c. or more of residual urine. This is the stage when it is most desirable to operate, for the following reasons: There is no hope of spontaneous improvement and every probability that things will grow worse. The kidneys have suffered little or not at all from back pressure. The bladder is still ahead of the bacterial invasion. The amount of material to be removed is less than it will be later and the risk of bleeding is possibly less. If the hypertrophy be benign it guarantees the patient against the pain and risk of catheter life and sepsis. If the hypertrophy be malignant it is the early operation which gives the patient the best chance for complete removal. The patient is younger than he will ever be again and there is steady increase in the mortality rate with each decade from forty on. The third stage usually begins when the patient acquires the catheter habit, though the fourth or septic stage may precede it.

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The Removal of Ureteral Stone by Cystoscopic Methods

DR. BRANSFORD LEWIS, St. Louis: It is probable that the estimate of Leonard is correct that 50 per cent. of ureteral calculi are capable of being relieved by the expectant plan, but what of the other 50 per cent.? Certainly it should not be immediate operation. There are recorded a sufficient number of successes attained by cystoscopic measures to warrant their use in favorable cases. Of course, it cannot be claimed that cystoscopic endeavor will always meet with a happy outcome. The injections or ureteral dilatations may have to be repeated several times with the stone descending in successive steps. But even that is better than abdominal section.

DISCUSSION

DR. W. F. BRAASCH, Rochester, Minn.: Undoubtedly the systoscopic method of removal of stones from the lower end of the ureter is the method of the future. This method is not as easy as it looks, however, and there are many stones that cannot be removed in this way. When the stone is above the bladder junction it would be impossible to remove unless very small and quite loose. I think the method of the future will be to incise the opening through the cystoscope. We have carried out some experiments on dogs which show that slitting the lower end of the ureter will not cause subsequent contraction.

DR. J. H. CUNNINGHAM, JR., Boston: That stones are very lightly held in the ureter I think is well evidenced by the fact that so many start from the kidney and pass into the bladder. The mere passage of a catheter by the stone will sometimes dilate the ureter so that the stone will pass. I think these cystoscopic methods should be tried before we undertake such an extensive operation as is required to remove a stone when we do any kind of an operation.

DR. WINFIELD AYERS, New York: Manipulation through the vagina and rectum may aid in getting these stones out of the lower end of the ureter. All one needs to do in a large number of cases is to change the position of the stone to have it pass.

DR. HUGH H. YOUNG, Baltimore: I agree that we ought to use the intravesical cystoscopic methods in the removal of calculi from the lower end of the ureter. By means of an intravesical rongeur I have been able to catch and remove two ureteral stones.

Liquor Aluminum Acetate in Colon Bacillus Infection of the Urinary Tract

DR. IRVIN S. KOLL, Chicago: Of my eight cases, five were urethritis, all following an acute gonorrhea, the colon bacillus, however, being obtained in pure culture; two were cystitis, and one was pyelitis, all pure colon bacillus infections. An average of thirty-one days for all cases was necessary to obtain a sterile urine. In no instance was there any local irritation worth noting.

Case of Malaria Simulating Renal Calculus

DR. E. O. SMITH, Cincinnati: A man, aged 29, July 8, 1911, was taken suddenly with a severe pain in left side of abdomen. The character and severity of the pains were such as to suggest renal calculus. The next day there was macroscopic blood in the urine, continuing for a day or so. He had another severe attack two weeks later. The patient had had at times some elevation of temperature but no chill. Radiographs showed no evidence of stone. The patient continued to suffer great pain. He gave no history of malaria. Thinking that possibly malaria might be the cause of the trouble, large doses of quinin sulphate were suggested, to be followed by Fowler's solution. The patient returned December 28, and said that his pain began to subside after the first dose of quinin. The *Plasmodium malariæ* was found in his blood. He had another severe attack Jan. 21, 1912. Since that time he has had no severe attacks, but still feels an occasional disturbance.

Case of Gonorrheal Pyelitis

DR. LOUIS C. LEHR, Washington: A man, aged 27, was seen Nov. 6, 1911, complaining of a urethral discharge and painful urination. He had had two previous attacks of gonorrhea, from which he recovered promptly. The present attack began Oct. 5, 1911. Examination showed a scanty purulent discharge containing gonococci. There was a marked terminal hematuria. The prostate and seminal vessels were apparently normal. The hematuria and pain subsided in about two weeks under rest and internal medication. Local treatment was then instituted, but in spite of all efforts the urine remained cloudy and continued to show gonococci until January 20, when cystoscopic examination revealed purulent urine coming from the left ureter. This ureter was catheterized and some of the urine inoculated on serum agar. The report from the laboratory showed a pure culture of gonococci. Stock and autogenous vaccines were tried but without beneficial result. On February 15 pelvic lavage with silver nitrate was started. After four of these treatments with solution of silver nitrate varying in strength from 1-5,000 to 1-2,500 the urine became clear and remained so, and cultures on serum agar proved negative.

The Gonorrheal Complement Fixation Reaction

DR. LOUIS E. SCHMIDT, Chicago: This series comprises 103 cases, all taken from my private practice. Thirty-four cases were individuals who denied gonorrheal infection and were clinically free from any sign or symptom of gonorrhea. The test was negative in every instance. There were three cases of individuals suffering from their first attack of gonorrhea. The test was made in the second week of the attack and was negative in each case. There were twenty-four cases of chronic gonorrhea, of which seventeen were positive and seven negative. Nearly all these cases had posterior adnexal trouble, and a few had epididymitis. In all these cases the gonococcus had been found within thirty days previous to making the test. In forty-two cases examined mostly for conditions other than gonorrhea, with a history of gonorrhea anywhere from one to thirty years previously, the test was positive in five and negative in thirty-seven. This group shows a large percentage of negative reactions in cases that are clinically cured. In my opinion this result indicates that a negative test in such a patient is good evidence that the disease is cured. This percentage also tends to show that the number of those who remain over a long period of time in a condition to infect with gonorrhea is far smaller than was formerly supposed.

Diagnostic Value of the Specific Complement Deviation Reaction in Gonorrhea

DR. JAMES A. GARDNER and DR. G. H. A. CLOWES, Buffalo: In our series of 106 gonorrheal cases, twenty-three showed a three-plus reaction, fifteen a two-plus, twenty-three a one-plus, thirty-seven were negative. Of the twenty-three cases showing a three-plus reaction twenty were examined, in eighteen of which we found intracellular diplococci microscopically. Of the fifteen cases giving a two-plus reaction thirteen were examined, in nine of which we demonstrated intracellular diplococci. Of the twenty-three cases showing a one-plus reaction, seventeen were examined, in eleven of which we demonstrated intracellular diplococci. We believe that the three-plus and the two-plus reactions are fairly diagnostic of the presence of a gonorrheal infection, while a one-plus reaction, without being confirmed by clinical data, should not be taken more seriously than should a one-plus Wassermann reaction.

TENNESSEE STATE MEDICAL SOCIETY

Seventy-Ninth Annual Meeting, held at Chattanooga, April 9-11, 1912

(Concluded from page 1225)

Surgery of the Tonsil as Related to Chronic Diseases

DR. C. B. WILEY, Chattanooga: Most important of the chronic diseases for which the tonsillar tissues are in many cases the primary foci of infection is tuberculosis. Local manifestations, however, of tuberculosis of the tonsils or their adjacent tissues, are comparatively infrequent. It is undeniable that most tonsils whether showing external evidence of inflammation or not, if taken between the thumb and finger

and squeezed, will expel more or less cheesy, foul-smelling material. This same material, by a series of experiments, when injected into guinea-pigs, has developed tuberculosis in fourteen out of twenty-one injections, and the remaining seven showed severe septic infection. The treatment of latent tuberculosis of the tonsil consists in their removal by the most complete method possible, to prevent further infection.

The treatment of hyperplasia of the tonsils necessarily becomes surgical in most cases. Local measures in such conditions are usually without results other than annoyance to the patient.

The Tonsils

DR. C. B. JONES, Knoxville: Tonsillectomy is superior to cauterization and tonsillotomy. The faucial tonsils should be removed when diseased or hypertrophied, because they interfere with proper breathing. The patient is more subject to catching cold, and the general health is more or less impaired. Tonsillotomy does not remove the source of infection. Tonsillectomy does. The latter can be performed under either a local or general anesthetic.

DISCUSSION

DR. E. C. ELLETT, Memphis: There is no doubt that recurrent tonsillitis and recurrent peritonsillar abscess cannot be treated by local measures, and I think most operators now remove the tonsil entirely. The operation advised by Sluder, of St. Louis, is the most satisfactory I have tried. I do not think we ought to attach any importance to the size of the tonsils. Enlarged tonsils generally make no more difference to the person in the majority of cases than does the size of the appendix. If the tonsil is diseased, whether it be small or large, it should be removed.

DR. GEORGE H. PRICE, Nashville: It is not that the tonsil primarily is at fault, but the invading agency is greater than the tonsil can handle. The removal of a tonsil should not be done unless absolutely necessary.

DR. O. DULANEY, Dyersburg: Some of the most unfavorable results I have seen have been in neurotic patients who underwent tonsillectomy. They were hyperesthetic to begin with, and any foreign substance which would cause irritation and contraction of the muscles caused the patient to complain of shortness of breath. Where they are not diseased and are not causing any local or constitutional trouble, it is well to let them alone.

Perforation of the Gall-Bladder With Report of Seven Cases

DR. BATTLE MALONE, Memphis: In only two of the seven cases was anything approaching an accurate diagnosis made, and one of these two was not confirmed either by operation or autopsy. Experience with any number of these cases quickly impresses one with the analogy between perforation of the gall-bladder and perforation of the appendix. In each we meet with acute free perforation with septic peritonitis, and with chronic perforations with limiting adhesions and localized abscesses. In the present series of cases, four have been of the pre-perforative type and three of the chronic. In free perforation of the gall-bladder, if an accurate history of preceding gall-stone colic is at hand, a correct diagnosis should be made; while on the other hand, the symptoms of acute infection of the gall-bladder with pericholecystitis are practically identical with chronic perforation and abscess, and it is practically always only by laparotomy that this complication is recognized. It is not difficult to recognize promptly a free perforation of the appendix, but this might readily be confused with gall-bladder perforation, especially if the appendix were situated high up. Aside from careful attention to preceding history there would be no way short of laparotomy to clear up the diagnosis. We should not mistake a perforation for a very severe colic, and if we obtain a clear history of preceding gall-stone disease, this is a more likely, as well as a more dangerous mistake, than the confusion with perforated gastric or duodenal ulcer.

DISCUSSION

DR. W. A. BRYAN, Nashville: I recall three cases in which there was perforation of the gall-bladder, and every one had been diagnosed as gall-stones, but only one had been diagnosed as perforation of the gall-bladder. In this case one of the bile-ducts had ruptured, with an accumulation of fluid localized in the lesser peritoneal cavity. The patient was extremely septic and died. A second case was one in which the gall-bladder was greatly distended and cystic, and there was a large stone in the cystic duct. There were other stones present, and ulceration had occurred toward the liver through the gall-bladder and the stones escaped into the liver-substance. There was a large accumulation of fluid in the gall-bladder, the patient having just had an inflammatory attack. In this case the gall-bladder was removed, and the patient recovered. In the third case the cystic duct was completely blocked by cicatricial tissue, yet the stones had perforated into the liver; the gall-bladder was contracted and contained stones, which were removed and the patient recovered.

The Traumatic Neuroses, Due to Alleged or Actual Injury, From a Medicolegal Standpoint

DR. RAYMOND WALLACE, Chattanooga: The wide-spread impression that the spine and spinal cord are liable, before all other parts, to meet with injury in cases of accident, accounts in large measure for the multiplicity of these cases in the courts today. The lawyers believe it, the laity believe it, and unfortunately many doctors believe it. Such cases are met with in the courts, but how rarely are they seen in private practice. The etiology of a traumatic neurosis does not depend so much on the extent of injury or physical violence as on its subjunctive reflection on the mind of the person injured. Its development is almost entirely psychogenous.

The natural mental inferiority of the injured one may, by designing lawyers, be attributed to injury. It is most essential to investigate in detail the physical, nervous and mental conditions of a claimant previous to an alleged accident. The moment the question of damages arises, the dominant or nearest relative usually exerts a most extraordinary and dangerous influence. Subsequent examinations by physicians in conversation with lawyers inflame the patient's mind. He now exaggerates his symptoms. The detection of the various forms of accident psychoses as differentiated from organ injury is not always of easy moment, and in many cases learned physicians will differ and appear as experts on opposing sides. Another phase of intense interest is that of pure simulation. This term should be employed only when the individual purposely and consciously attempts to deceive. He may willfully exaggerate such symptoms as do exist, or represent diseased conditions to exist which either preexisted the accident, or which do not exist at all. In short, he may present symptoms or physical signs due to an accident which never occurred.

DISCUSSION

DR. JERE L. CROOK, Jackson: I cannot recall a single case of traumatic neurosis in my experience in which the lure of lucre has not played a most important part in it. There has been no definite disease in any of the cases. There has been in every case the expectation of profit from the time the suit was in process of formation or had been instituted. This is the largest factor in the etiology of traumatic neurosis in my judgment. In every case of this kind we should subject the patient to every possible means of determining whether or not there be a definite pathology.

DR. BATTLE MALONE, Memphis: My observation has been that railroad employees do not have these neuroses, whereas they are very common among passengers. The railroad employee, when he is hurt, is anxious to get well. He wants to go back to work as quick as possible, and he is inclined, as a rule, to minimize his troubles. In the case of the passenger, who has no particular employment, the neurosis does not interfere with his business. I have been compelled to believe that a great many of the so-called neuroses are not neuroses at all, but are cases of simulation.

DR. E. T. NEWELL, Chattanooga: We should examine these patients with traumatic neurosis and give them the benefit of the doubt. I recall the case of a man who was thought to have a traumatic neurosis; but it was found later that he had sustained a real injury to the hip, and had a metastatic infection from which he died.

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DR. S. J. DYE, Chattanooga: I have had a good deal to do with these medicolegal cases, and do not recall a single patient who was not cured shortly after the litigation.

Placenta Prævia, With Report of a Case

DR. M. A. BLANTON, Baileyton: The interesting features in this case were: (1) no history of hemorrhage during the last third of pregnancy; (2) a placenta prævia centralis, and (3) twelve hours' hard labor without rupture of the membranes or hemorrhage.

DISCUSSION

DR. H. H. MCCAMPBELL, Knoxville: The reason cesarean section is advocated in cases of placenta prævia is that there are more surgeons than there are obstetricians. Almost any practitioner can perform a cesarean section if he is efficient in the art of surgery, while to manage a case of placenta prævia correctly requires considerable skill. There are very few cases of placenta prævia in which the child survives. If delivered alive, it usually succumbs for the reason that in the vast majority of cases of placenta prævia the mother has suffered more or less from hemorrhage for two or three months, leaving her in an anemic condition, and consequently the child is anemic and poorly nourished.

DR. H. W. CHENEY, Chattanooga: When a practitioner has not the facilities to send a patient to the hospital, the thing to do is to go through the placenta and do a bipolar version.

DR. E. A. LONG, Johnson City: If the diagnosis of placenta prævia can be made early, it is a safer plan for the mother—and her health should be considered—to produce a therapeutic abortion.

DR. H. BOYD, Scottsboro, Ala.: Whenever you can get the patient to a hospital, with a good surgeon, empty the uterus as quickly as possible by cesarean section.

DR. H. G. SMITH, Cedarville, New Jersey: We cannot advocate too highly cesarean section when a patient has been under the intelligent supervision of other physicians and has not been examined by a midwife or by an incompetent practitioner.

Brain Surgery

DR. L. L. SHEDDAN, Knoxville: Intracranial pressure is always indicative of some abnormality and is produced by a variety of conditions, such as intracranial tumors, epidural, subdural, and cerebral hemorrhages, effusions into the ventricles, hydrocephalus, and trauma. When pressure within the cranial cavity is sufficient to produce structural changes, if not relieved in a short time, surgical interference is indicated. In other cases in which tension is not sufficient to destroy, but great enough to produce radical disturbance of function, it is good practice to do some decompressive operation.

Treatment of Peritoneal Infections

DR. W. M. MCCABE, Nashville: Irrigation of the peritoneal cavity is not to be recommended, except where one has had the misfortune to rupture a large suppurating cyst or fibroid tumor. The peritoneal cavity in this instance is filled with pus, and no harm can be done. There are certain gutters in the abdominal cavity which, aided by the mesentery, guide fluids to the pelvis and localize infection. Irrigation cannot do anything but overflow these channels, macerate feces and stomach contents, and thereby convert a local into a general infection. The peritoneum can wall off and take care of a solid mass of feces in a localized area much better than it can myriads of small particles spread throughout the cavity. I have always been content to wipe out foreign material with gauze sponges and not to irrigate. I have not lost a patient with visceral perforation from peritoneal infection. I believe drainage to be indicated, first, in all cases of suppurative peritonitis, whether local or general; second, where necrotic tissue or foreign material is left in the cavity; third, where we are not certain that stitches in hollow viscera will not hold; fourth, where it is impossible to control hemorrhage. The only valid objection that can be advanced against drainage is its ability to produce adhesions, which, in my opinion, are sometimes very helpful. The time to commence treating peritoneal infection is while it is in its incipiency and localized. Operate immediately, if the patient's condition will permit, in all cases of visceral perforation, whether from ulcer or vulnerable bodies. It goes without saying that the time to remove the appendix is when the condition is localized in this organ.

This would be an ideal method of treating infected fallopian tubes, but unfortunately infection has reached the peritoneum before one sees the patient.

Treatment of Earache

DR. WALTER DOTSON, Gallatin: The treatment of any form of earache can be summed up in the word drainage. Drainage of the middle ear can be accomplished in three ways: First, drainage through the eustachian tube; second, drainage through the drum membrane, as exosmosis, and third, drainage through the drum membrane by an incision with the knife.

Simple or pressure earache should be treated by draining the middle ear of its contents through the eustachian tube. This can be done by catheterization of the tube and forcing its canal open by compressed air. Drainage should also be secured by exosmosis through the drum membrane. This is best secured by the application to the external surface of the membrane, of a snug-fitting, cone-shaped tampon. The tampon should be made fresh from absorbent cotton and the large end of the cone fluffy. This cone should be soaked in an antiseptic anesthetic dissolved in glycerin. Warm this tampon over the lamp and apply the large fluffy end of the cone snugly against the drum membrane. This tampon is left in place for twenty-four hours or more. By it we get mechanical support to the bulged-out drum membrane. Antiseptic application to the inflamed surface, anesthetic application for the relief of pain, and the glycerinated tampon produce an exosmosis of the serum in the middle ear. This anesthetic antiseptic solution is made from 10 per cent. phenol (carbolic acid), and 4 per cent. cocain dissolved in glycerin. Earache produced by suppuration of the middle ear should be treated by thorough drainage through an incision of the drum membrane.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

California State Journal of Medicine, San Francisco

April, X, No. 4, pp. 131-176

1 Life of Radium and its Therapeutic Use in Internal Medicine. E. O. Jellinek, San Francisco.
2 Economic Value of Deciduous Teeth. M. E. Jordon, Los Angeles.
3 Mastoid Cases, with Special Reference to Diagnosis. J. M. Stephens, San Francisco.
4 Rational Surgery of Retrobulbar Neoplasms and Case of Cylindroma of Orbit; Extirpation of Same and Preservation of Eye. P. De Obarrio, San Francisco.
5 Diagnosis and Treatment of Syphilis. G. D. Culver, San Francisco.
6 *Experimental Study of Nephritis with Empyema of Cranial Sinuses and Milky Serum. C. Quinan, San Francisco.
7 Case of Sinus Thrombus Due to Welch Gas Bacillus. E. D. Shortlidge, San Francisco.
8 Results Obtained with Modified Vaccine. L. D. Green, San Francisco.
9 Important Points in Early Recognition and Differentiation of Some Diseases of Nervous System. H. C. McClanahan, San Francisco.
10 *Strangulated Femoral Hernia Containing Undeveloped Kidney. J. W. Seawell, Healdsburg.

6. Nephritis with Empyema of Cranial Sinuses and Milky Serum.—In the course of a series of experiments on the blood and urine proteins of a nephritic man, a peculiar lipemia was brought to light by Quinan. The fresh blood of this individual was not in any way remarkable. It appeared, in fact, to be entirely normal. On standing, however, in a very short time white, milky serum began to separate and, generally speaking, in the course of an hour it had accumulated in such abundance that nothing whatever could be seen of the clot, and the vessel appeared to contain pure milk. The fresh serum was

slightly alkaline in reaction. It showed no tendency to separate into layers on standing, and after several weeks *in vitro* remained homogeneous in appearance and uniformly white. It was not affected in the least by ordinary filtration. And it passed without change through a Berkefeld filter. When diluted in the proportion of 1 to 100 with distilled water, it formed a strongly opalescent solution. This mixture was remarkably stable. Weak mineral acids and alkalies had no demonstrable effect on it, and various neutral salts brought about no change that could be detected. All attempts to clarify it by means of organic fat solvents, failed utterly. When, on the contrary, the serum, diluted with fifteen parts of water was gently mixed with chloroform, so far from rendering the solution clear this solvent invariably had the reverse effect and augmented the cloudiness. By treating the milky serum as Boggs and Norris suggested, with an excess of ammonium oxalate crystals, and allowing it to stand twelve hours, ether, previously tried without success, rendered the serum quite clear, but it was invariably noted, also, that after a few hours the serum emitted an intense ammoniacal odor, exactly as would have occurred in an ordinary double decomposition in the presence of a stronger inorganic base. The diluted serum could always be clarified by filtering out the carbon dioxid globulin group.

10. **Strangulated Femoral Hernia.**—Seawell's patient was 83 years old. Had always enjoyed good health, with the exception that ever since he could remember he had been troubled with a lump that would appear from time to time in his left groin; the lump would remain for a few hours, then disappear, but was always accompanied by pain in the epigastrium. Recently during a vomiting spell or while lifting, the lump returned, accompanied by severe pain and vomiting. A diagnosis of strangulated hernia was made; an attempt to reduce under chloroform was unsuccessful. On being called in on the fifth day, Seawell found the patient in a fairly good condition, pulse 80, temperature 99.6 F., somewhat emaciated, arteries somewhat sclerotic, lungs in good condition, abdomen apparently presented nothing except some distention over the epigastrium, also some resistance to pressure in that region; no particular tenderness in any one spot. In the left groin was a mass about the size of a hen's egg, firm to the touch, somewhat tender, immovable, not tympanitic; had exactly the same feeling that you would expect to find in a strangulated gut. Immediate operation was advised and consented to. The contents of the hernia were exposed; there was not any sac covering a blue-black mass that at first appeared to be gut; no fluid surrounded it. On close examination the mass proved to be solid and attached by a pedicle, but further examination proved the mass to be a small undeveloped kidney attached by its ureter. The organ was amputated, the ureter cauterized and the wound closed. The patient stood the operation well. But the relieving of the strangulated kidney did not relieve him either of his vomiting or pain, as both seemed to get progressively worse. The patient died on the fourth day.

Wisconsin Medical Journal, Milwaukee

March, X, No. 10, pp. 555-618

11 Anomalous Renal Vessels Causing Renal Colic or Symptoms Referable to Appendix or Gall-Bladder. A. H. Levings, Milwaukee.
12 Vaginal Ptosis: Surgical Treatment. R. Elmergreen, Milwaukee.
13 Ocular Manifestations of Hysteria. D. F. Harbridge, Philadelphia.
14 Business Side of Practice of Medicine. W. F. Zierath, Sheboygan.
15 Diabetes Insipidus. F. Johnson, North Freedom.

West Virginia Medical Journal, Wheeling

April, VI, No. 10, pp. 327-362

16 Meaning of Conservation in Medicine and Surgery. C. R. Ogden, Clarksburg.
17 *Protection of Public by State Authority. E. Davis, Charleston.
18 Bleeding from Lungs in Tuberculosis. C. A. Wingerter, Wheeling.
19 *Position of Women at Time of Labor. T. R. Evans, Huntington.
20 Acted as Her Own Midwife. L. Buckle, New York.
21 Amebiasis: Report of Case. J. B. Whittington, Hansford.

17. **Protection of Public by State Authority.**—The plan outlined by Davis consists essentially of the following: First, a central bureau composed of a sufficient number of competent physicians, who should give their whole time to the work, being paid an adequate salary and be given full authority for the obtaining of information under compulsion of law, to disseminate popular information on hygiene and sanitation, oversee in a general way all local measures for the prevention of disease, and have at their disposal sufficient funds for these various purposes; second, local funds and officers provided for by the authority of the state through its legislature, and not dependent on the local government should such local government fail to enforce the laws; these local authorities having funds and power under state commissioner of health to take all needful measures for the prevention of disease and the protection of the health of the people.

19. **Position of Women at Time of Labor.**—In the course of his remarks on the position of women at the time of labor, Evans says that the squatting position on the floor, or on a hard level surface gives all of the advantages of the lithotomy position, and more to the woman in labor. In the first place, there is the great advantage of gravitation. In addition, she can powerfully assist with the compression by her thighs, and they can compress the uterus not only laterally, but in front and downward. Indeed, it is evident to Evans that the main reason for the creation of the soft yet powerful thigh of a woman is to materially aid in her delivery. They are genital. She does not need such bulky levers purely for locomotion. The softness of the tissues of the thighs in woman prevents damage to the uterus when used for its compression. In this attitude the thighs, when brought to press on the uterus, tend to correct its usual early obliquity, and the inclined planes act as skids. Also, the sufferer perhaps instinctively accommodates the container to the thing contained, or by the sensation of pain and pressure changes the angles and axes of her pelvis by contortions, which she can do with greater advantage than on a bed. In Evans' experience at coal mines, where a barren woman is a curiosity, the perineum is very seldom ruptured, and he does not support it in the cases of multiparæ to prevent its rupture, but to assist the delivery. The damage of a ruptured perineum when the woman is in the squatting attitude is more apparent than real; the danger is less. As labor is much expedited by the squatting or kneeling attitude, uterine inertia is less likely. Should there be too much hemorrhage it would sooner be discovered if the woman's hips are not sunken in a bed in a darkish corner, and she can be better attended on a mat on the floor. That fortunately rare condition, concealed hemorrhage, more quickly exposes itself when the woman is squatting or kneeling. She the more quickly shows evidence of faintness.

Monthly Cyclopedia and Medical Bulletin, Philadelphia

March, XV, No. 3, pp. 129-192

22 Dental Disease as It Affects Mind. H. S. Upson, Cleveland.
23 *Chronic Acetanilid Poisoning a Perfectly Definite Symptom-Complex. H. C. Gordinier, Troy, N. Y.
24 Causation of Psychopathic Maladies. B. Sidis, Portsmouth, N. H.
25 Imperfections in Diagnosis and Treatment of Pathologic Conditions of Teeth and Jaws. R. H. Ivy, Philadelphia.
26 Symptoms and Treatment of Pneumococcus Infection in Pulmonary Tuberculosis. F. N. Robinson, Monrovia, Cal.

23. Abstracted in THE JOURNAL, June 3, 1911, p. 1677.

Interstate Medical Journal, St. Louis

April, XIX, No. 4, pp. 305-398

27 *Diaphragmatic Hernia Diagnosed Before Operation. N. B. Carson and L. Huelsmann, St. Louis.
28 *Raynaud's Disease. E. C. Beck, New York.
29 Economics of Food. A. L. Benedict, Buffalo, N. Y.
30 Surgical Treatment of Ascites. J. F. Binnie, Kansas City, Mo.
31 Examination of Cerebrospinal Fluid. A. D. Dunn and G. A. Stevens, Omaha, Neb.
32 Etiology and Clinical Aspect of Ascites. C. H. Neilson, St. Louis.

27. **Diaphragmatic Hernia.**—In order to reach the hernia, Carson and Huelsmann made an incision in the eighth intercostal space on the left side, down to the pleura, which was opened throughout the entire extent of the skin incision. Before making the pleural opening, pressure in the lung was raised to 25 mm. of mercury. The rib stretcher was then introduced; but on account of rigidity of the ribs, enough space

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could not be secured and it had to be removed, and the eighth, ninth and later the seventh ribs were resected. On opening the pleura, the chest was seen to be full of small intestines, except at the upper border, where a small edge of the lower lobe of the lung and a small fringe of omentum were visible. When the small intestines were pushed down, a large opening in the diaphragm was found, and was seen to extend backward, from about an inch from the costal cartilage in front, to the posterior limit of the diaphragm behind, and about a half or three-quarters of an inch outside the pericardium and the esophagus. Through this opening came into the pleural cavity all of the stomach, transverse colon, the omentum, parts of the ascending and descending colon and about 15 feet of the small intestine. After closing the hernial opening, that in the chest wall was closed in layers, but before closing the pressure was raised and the lung fully expanded. The hernia was evidently congenital.

28. **Raynaud's Disease.**—While amputating the large toe for gangrene, Beck noticed that bleeding was very scanty, and remarked about the probability of sclerosis in this case. Forty-eight hours later the gangrene had extended, following approximately the branches of the dorsalis pedis artery. The patient complained of spasmodic pains radiating throughout his calf, but showed no symptoms of sepsis. Beck advised amputation at the knee and operated forthwith. The patient made an uneventful recovery. The pathologist's report was obliterating endarteritis. The question arises, says Beck, Is Raynaud's disease an affection of the vasomotor nerves causing disease of the arteries, or is it primarily a disease of the inner coats of the arteries with the nervous symptoms secondary to it?

Bulletin of Lying-In Hospital of City of New York

March, VIII, No. 2, pp. 45-88

33 Obstetric Forceps and Their Relation to Mother and Child. J. W. Markoe, New York.
34 Care of Normal Obstetric Patient During Third Stage of Labor and Puerperium. R. McPherson, New York.
35 Case of True Intraligamentous Unruptured Tubal Pregnancy of Eight Months. C. F. Jellinghaus, New York.
36 Congenital Anomalies of Appendix. R. McPherson, New York.
37 Three Cases of Cysts of Omentum. J. W. Markoe and R. McPherson, New York.
38 General Hemangiomatosis of Placenta. J. R. Losee, New York.

Cleveland Medical Journal

March, XI, No. 3, pp. 161-240

39 *Systematization of Certain Morbid Processes as Regards Their Relation to Nervous System on Anatomic Basis of Its Functional Activity. D. H. Dolley, Columbia, Mo.
40 *Treatment of Septic Abortion. E. O. Houck, Cleveland.
41 Adrenals. R. G. Hoskins, Columbus.
42 Buphthalmia: Case Report. S. H. Monson, Cleveland.
43 *Gastro-Intestinal Absorption of Drugs. T. Sollmann and P. J. Hanzlik, Cleveland.
44 Causes and Control of Insanity. A. G. Hyde, Cleveland.
45 Prehistoric Surgeon: Trephining by Primitive Man. F. D. Snyder, Ashtabula.

39. **Neurocytologic Changes.**—It is shown by Dolley that in numerous abnormal conditions there is a common anatomic basis of those identical nerve-cell changes which are peculiar to normal functional activity. The common exciting cause affecting the nervous system which is thus predicated is to be found in the physiologic factor of stimulation. From this, work, and finally overwork, result. The types which are thus classified under their form of stimulation, for undoubtedly still other conditions remain to be thus grouped, are: from trophic stimulation, anemia; from thermal stimulation, heat exhaustion; from mechanical stimulation, traumatic shock and at least some traumatic neurosis; from chemical stimulation of the bacterial toxins, a group of infectious diseases, again broadly typified; from an undetermined stimulation, either trophic, chemical or psychic, exophthalmic goiter; and from an excessive spontaneous stimulation of every-day life, which in its normal display leads finally and inevitably to natural senescence, neurasthenia and allied disorders.

40. **Treatment of Septic Abortion.**—The employment of vaginal or uterine packs in the treatment of abortions, Houck says, should be greatly restricted because they favor infection. In the presence of a virulent infection the expectant plan of treatment offers the best result. Where such expectant plan is followed the virulent organisms disappear in from one to three weeks, when the uterus may be safely evacuated. In following out the expectant plan of treatment the patient should receive twice daily a hot saline or bichlorid douche. The douche serves the double purpose of cleansing the vagina and promoting contraction of the uterus. Ice bags should be applied to the hypogastrium and the bowels should be emptied. Houck employs elixir of iron, quinin and strychnin as a general measure. He also allows a rather liberal diet. The patient is placed in the Fowler position to promote drainage from the vagina. He has had no experience with vaccines or serums, for they do not seem to be recommended in acute septic conditions. When the temperature has returned to normal or thereabouts and remains so for two or three days, the uterus may be safely evacuated. He has not found that this expectant plan, even when followed by a curettage, appreciably lengthens the stay in bed. When the curetting was undertaken he was surprised at how little the uterus contained. The average stay in hospital in his cases was twenty-one days; one private patient he kept in bed for two months, not because of her infection, but because of an acutely dilated heart following an endocarditis as a result of criminal abortion.

43. **Gastro-Intestinal Absorption of Drugs.**—The authors have been engaged for some years in studying the absorption of drugs from the alimentary canal by the use of quantitative methods. So far they have completed the investigation of phenol and of sodium iodid. The chemical, physical and pharmacologic characters of these two substances are very different. Accordingly, they have been able to show that there are fundamental differences in the phenomena of their absorption. On the other hand, notwithstanding this dissimilarity, they also present some interesting features in common. The general plan of the experimentation consisted in placing known quantities of the substances into the ligated stomach or intestinal segments of anesthetized dogs or cats, under varying conditions. The portions remaining unabsorbed in the contents and tissues of the viscus were then determined quantitatively. The amount of the substance which had disappeared, which had been absorbed, was thus accurately known. One of the most striking phenomena, with both drugs, was that the absorption is not a steady process. In both cases it proceeds very rapidly for the first few minutes, and is then markedly checked or even practically inhibited. For instance, some 35 per cent. of the phenol, or 50 to 75 per cent. of the iodid is absorbed within ten minutes after their administration. The exact figures vary in different experiments. The amount absorbed at the end of two hours is but very little greater; some 25 to 65 per cent. of the drug remains unabsorbed during the duration of the experiment. The phenol and the iodid both present this phenomenon of inhibiting their own absorption. The mechanism of the inhibition, however, is quite different in the two cases. The absorption of phenol (and incidentally also of the iodid) is scarcely affected by changes in the general blood-pressure, unless this falls to the shock level. On the other hand, the absorption of phenol is greatly influenced by changes in the intestinal circulation. The mechanism of the iodid inhibition is quite different: This is strictly local; for it cannot be produced by placing the iodid into another loop or by injecting it intravenously. It is only produced by direct contact, and is confined to the epithelial surface to which the iodid has been applied. Intestinal absorption is not confined to the living animal, but may occur quite extensively after death. The post-mortem absorption may amount to 47 per cent. of phenol, 35 per cent. of sodium iodid and 15 per cent. of alcohol.

Lancet-Clinic, Cincinnati

April 6, CVII, No. 14, pp. 371-396

46 *Preventive Vaccination Against Typhoid. W. S. Harpole, Chicago.
47 Importance of Early Diagnosis of Chronic Kidney Inflammations. D. M. Hall, Memphis, Tenn.
48 Supraorbital Pain: Its Significance. L. D. Brose, Evansville, Ind.
49 Histopathologic Studies on So-Called Osteoma Cutis. A. Ravogli and G. Goosman, Cincinnati.
50 Cases of Protracted Intervals Between Births of Twins. W. W. Vinnedge, Lafayette, Ind.

46. Abstracted in THE JOURNAL, Oct. 28, 1911, p. 1479.

Annals of Surgery, Philadelphia

April, LV, No. 4, pp. 473-640

51 *Cephalic Tetanus. A. J. Brown, New York.
52 Treatment of Heart Wounds. E. H. Pool, New York.
53 Pneumectomy: Its Possibilities. S. Robinson, Boston.
54 Tumors of Male Breast. J. Speese, Philadelphia.
55 Clinical Features and Treatment of Acute Perforating Gastric and Duodenal Ulcer. E. Eliot, Jr., New York.
56 *Repair of Hernia from Peritoneal Side of Abdominal Wall. E. H. Beckman, Rochester, Minn.
57 Congenital Malformations of Ureters. D. N. Eisendrath, Chicago.
58 *Operation for Aneurismal Varix of Popliteal Vessels. J. C. Da Costa, Philadelphia.

51. **Cephalic Tetanus.**—The patient whose case is the seventh reported in the United States was struck over the right temporofrontal region by the tine of a mechanical manure spreader, which caused a lacerated wound of the forehead. The blow was severe enough to knock him down, and he thinks he was unconscious for a few minutes, was dazed for an hour or two, and suffered from a severe headache for the remainder of the day. The wound was cleansed and dressed. It was found to extend down to and at one point through the periosteum, but there was no evidence of fracture of the skull. The following day the patient felt practically well, and went about his work as usual on that day and on the day following. Three days after the accident the patient noticed that he could not perfectly control the right side of his mouth while eating, and particularly when trying to take fluids. This was followed on the next day by twitching of the muscles of the left side of his face, which increased in severity, and soon tonic spasms of the muscles of mastication of both sides supervened, giving rise to a marked trismus. There were no constitutional symptoms and the patient did not feel sick in any way. The muscular spasms became so severe that six days after the accident he was unable to take any nourishment by mouth, and his jaws were so tightly clenched that the teeth of his lower jaw were cutting into the gum of the upper and it was necessary to extract six of them. Subsequent to this he was able to take liquid nourishment by the mouth for a day, but on the following day it was necessary to resort to rectal feeding. There was some slight twitching of the extremities. From the sixth until the fourteenth day of his disease, inclusive, the patient received 65,500 units of tetanus antitoxin, injected subcutaneously in ten doses, ranging from 1,500 to 11,500 units at a dose. The patient was discharged on the twenty-eighth day after his injury, with a very slight prosopoplegia remaining, and with the wound healed by granulation after a mild suppurative course.

56. **Repair of Hernia.**—The following is a description of the technic in a case of femoral hernia used at the Mayo Clinic. After the primary operation has been completed, the abdominal wall is retracted on the side of the hernia so that the femoral ring is exposed. A pair of artery forceps are then introduced through the hernial ring from within the abdomen to the bottom of the sac. The sac is grasped with these forceps and pulled back into the abdomen. Two or three mattress sutures of heavy linen or silk are then passed completely through the neck of the sac and tied. The remaining portion of the sac can then be either excised or stitched to the abdominal wall. The most essential factor in the cure of a hernia is to obliterate the sac, and following this operation, the sac is completely obliterated, and it is impossible for it to reinvert through the femoral ring. In the cure of inguinal hernia by this method, only those cases in which the sac is of small size are suitable; that is, the entire sac must necessarily be pulled back into the abdomen and the pillars of the internal ring sutured with mattress sutures of linen or silk, similar to the femoral hernia just described.

58. **Operation for Aneurismal Varix of Popliteal Vessels.**—In the case cited, Da Costa made a longitudinal incision of the popliteal vein and sutured the opening into the artery from within the vein. Transverse division of the vein on each side of the opening with utilization of an isolated portion of the vein wall for a superimposed flap which was laid over the line of sutures in the artery. End-to-end union of the divided vein.

Journal of Medical Society of New Jersey, Orange

April, VIII, No. 11, pp. 557-610

59 Hemotherapeutics or Use of Blood as Therapeutic Agent; Technic of Direct Transfusion. A. L. Soresi, New York.
60 Treatment of Syphilis in General Practice. C. L. DeMeritt, Hoboken.
61 Pregnancy and Neuropathology. S. Husserl, Newark.
62 Edema of Children. E. G. Hummel, Camden.
63 Optimism in Medicine. W. L. Pyle, Jersey City.
64 Eye-Strain. T. R. Chambers, Jersey City.
65 Clinical Observations on Kidney Functional Diagnosis. E. A. Ill, Newark.

Boston Medical and Surgical Journal

April 11, CLXVI, No. 15, pp. 547-582

66 *Chronic Ulcer or Chronic Indigestion: Successful Treatment by Surgical Measures: Report of Twenty-Five Cases. C. L. Scudder, Boston.
67 Chorionepithelioma. S. Rushmore, Boston.
68 *Relation of Gonorrhea to Pelvic Disease. G. W. Kaan, Boston.
69 Palliative and Operative Treatment of Anal Fissure. T. C. Hill, Boston.
70 *Delicate Method for Obtaining Hemin Crystals from Minute Blood-Stains. W. F. Whitney, Boston.
71 Rupture of Bowel from Compressed Air; Operation; Recovery. F. J. Cotton, Boston.

66. **Chronic Ulcer or Chronic Indigestion.**—The twenty-five cases of chronic ulcer recorded by Scudder represent cases which had failed to be cured by medical treatment. At best they had had only temporary relief from acute symptoms under medical treatment. They have all, with two exceptions, been followed in their life history since operation. With one exception these have remained practically well for from one and nearly two to seven years following the surgical treatment. This time of freedom from symptoms is longer than the longest interval between attacks in any of these cases under medical treatment. In other words, the surgical treatment of these cases (each instance being a case of demonstrated gastric or duodenal ulcer or its sequelæ) has proved of greater value than the medical treatment.

Scudder believes that this group of cases of chronic indigestion demonstrates that modern surgical methods do assist in the healing of certain chronic ulcers.

There were twenty-five patients and twenty-seven operations. Two patients were operated on after the ulcer had perforated and had been sutured; hence the two additional operations.

Fifteen were cases of obstruction at the pylorus or hourglass deformity at the middle of the stomach. Five presented no obstruction at the pylorus; four were perforated gastric ulcers; one was a perforated duodenal ulcer.

There were two deaths in this group of cases; one from perforation of a gastric ulcer near the pylorus and one following partial gastrectomy among the early cases due to a mechanical difficulty. There have been no deaths following the simple posterior gastro-enterostomy. There have been no cases with the vicious circle or vomiting due to obstruction distal to the new stoma. There have been no cases of gastrojejunal ulcer near the anastomotic opening.

68. **Gonorrhea and Pelvic Disease.**—Kaan believes that statements which claim that the gonococcus infection in the woman is responsible for 60 per cent. or more of the operations for pelvic inflammation are decided exaggerations and should be modified in the interest of truth and proper teaching.

The statement that 45 per cent. of the cases of sterility are due to gonorrhea is also discredited by him.

70. **Method of Obtaining Hemin Crystals from Minute Blood Stains.**—Whitney has worked out the following method: A minute fragment of the suspected substance, a scraping from a stain or a bit of stained fiber is placed on a slide and a very small drop of formic acid, sp. gr. 1.20, is brought over this with a glass rod. Over the drop is inverted a small watch glass, which should not touch it, nor project beyond the edge of the slide. A gentle heat is applied directly beneath the drop, and the moment condensation is seen on the inside of the watch glass over the drop, the heat is discontinued, the watch glass lifted off and the remainder of the fluid allowed

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to evaporate in the air. When dried, it can be examined microscopically and mounted permanently in a drop of Canada balsam. The crystals are very small, usually requiring a high dry or oil immersion lens to see them well, but they are so numerous that they cannot be overlooked. A second application of acid does not seem to make them any larger. But the fact that the crystals are very small shows that only a minute quantity of blood coloring matter is necessary for their formation, and speaks for the delicacy of the method. In practice it has been found that the addition of a very little hydrobromic acid, 34 per cent., 1 drop; acid formic sp. gr. 1.20, 4 c.c., gives darker and more numerous crystals than with formic acid alone.

Kentucky Medical Journal, Bowling Green

April 1, X, No. 7, pp. 277-334

72 Cerebrospinal Meningitis. W. L. Mosby, Bardwell.
73 Climacteric Neurosis in Women. J. O. Jenkins, Newport.
74 Acute Otitis Media; Cause, Complication and Treatment. W. J. Thomason, Newport.
75 General Practitioner's Laboratory. L. A. Tate, Louisville.
76 Cesarean Section. A. H. Barkley, Lexington.
77 Physician as Expert Witness. H. L. Waggener, Bardwell.
78 Salvarsan in Treatment of Syphilis. J. Schultz, Logmont.
79 Case of Premature Children. W. E. Jackson, Arlington.
80 Present Status of Cancer of Uterus. G. N. Cowden, Nashville, Tenn.
81 Old Transylvania University of Old Kentucky. J. Clabn, Owensboro.

Medical Record, New York

April 13, LXXXI, No. 15, pp. 698-742

82 Some Salient Points in History of Causal Agent of Syphilis. J. B. Stein, New York.
83 Papilloma of Vocal Cords Cured by Radium. R. Abbe, New York.
84 Pediatric Memoranda. Congenital Myxedema, Cystic Goiter with Feeble Mentality. H. B. Sheffield, New York.
85 Examination of Duodenal Contents for Diagnostic Purposes to Clear Up Certain Affections of Upper Abdominal Region. M. Gross, New York.
86 *Cheyne-Stokes Respiration, with Report of Two Remarkable Cases. D. Feilberbaum and S. Ehrenreich, New York.
87 Extension and Recurrence of Breast Cancer Through Deep Fascia. L. F. Watson, Oklahoma, Okla.
88 Malignant Tumors. L. M. Stroud, Terrell, Texas.
89 Effect on Ears of Rapid Transit Through Hudson and East River Tunnels. E. P. Fowler, New York.

86. **Cheyne-Stokes Respiration.**—The two cases cited by the authors are unique in that (1) the typical manifestations of Cheyne-Stokes respiration continued for a long period of time, and (2) they were associated with definite symptoms of pontomedullary disease and chronic nephritis, so that clinically the origin of this symptom was evidently very obscure. In the second case the periods of dyspnea and apnea each lasted for 35 seconds.

Journal-Lancet, Minneapolis

April 1, XXXII, No. 7, pp. 169-196

90 Polycystic Disease of Kidney. D. C. Balfour, Rochester, Minn.
91 Rounders. F. W. MacManus, Buford, N. Dak.
92 Albumin Milk: Technic and Indications for Its Use. F. W. Schlutz, Minneapolis, Minn.

New Orleans Medical and Surgical Journal

April, LXIV, No. 10, pp. 725-810

93 Nerves and Their Sensations, Especially Pain. C. W. Allen, New Orleans.
94 Etiologic and Epidemiologic Irregularities of Cerebrospinal Meningitis. H. D. King, New Orleans.

American Journal of Medical Sciences, Philadelphia

April, CXLIII, No. 4, pp. 469-624

95 *Jejunostomy. W. J. Mayo, Rochester, Minn.
96 Pancreatic Lymphangitis. J. B. Deaver and D. B. Pfeiffer, Philadelphia.
97 *Chronic Cholecystitis. J. R. Verbrycke, Jr., Washington, D. C.
98 Value of Frozen Sections in Teaching of Physical Diagnosis. H. R. M. Landis and G. Fetterolf, Philadelphia.
99 *Treatment of Pulmonary Tuberculosis by Compression of Lung. M. E. Lapham, Highlands, N. C.
100 *Leukemic Tumors of Breast Mistaken for Lymphosarcoma. C. A. McWilliams and F. M. Hanes, New York.
101 Osteitis Deformans, Paget's Disease: Reports of Two Cases and Autopsy in One. B. F. Stahl, Philadelphia.
102 *Value of Nitric Acid in Cauterizing Wounds Made by Rabid Animals. P. Bartholow, New York.
103 Medical Aspect of Chronic Typhoid Infection (Typhoid Bacillus Carriers). W. J. Stone, Toledo, Ohio.
104 Epidemic Poliomyelitis: Clinical Study of Acute Stage. R. Stein, New York.
105 *Clinical Contribution to Our Knowledge of Poliomyelitis with Cortical Involvement. L. P. Clark, New York.
106 Value of Nauheim Baths in Nephritis with High Blood-Pressure. E. A. Newton, Bad Nauheim, Germany.

95. **Jejunostomy.**—Jejunostomy is an active competitor of gastrostomy in cases of esophageal and cardiac obstruction, and in extensive ulcers which cannot be excised and gastrojejunostomy is not feasible. In malignant diseases of the stomach of the ulcerous type it offers a means of palliation. The technic of jejunostomy is described by Mayo as follows: The abdomen is opened by an epigastric incision either in the midline or to the left in the rectus muscle. The jejunum is picked up and, selecting a point from 12 to 16 inches from its origin, a loop is drawn out of the abdomen, nicked on the convex surface and a No. 9 rubber catheter pushed through the opening down stream until it extends about 3 inches inside the lumen of the jejunum. This point is fixed in position by a single chromic catgut suture, the catheter is then infolded by the jejunal wall for an inch or an inch and a half by mattress sutures of linen after the plan of Witzel. The intestine is anchored to the peritoneum by two or three linen sutures in the lower angle of the incision which is closed down to the tube in the usual manner or the end of the catheter can be brought out of a small stab wound at one side of the incision, the intestine being fixed to the peritoneum on the inside by several linen sutures.

Liquid feeding may be commenced at any time and carried out for an indefinite period without danger of leakage and with a certainty that the nutritive material will pass into the assimilative tract. Leakage does not follow the removal of the tube and if it should slip out accidentally it must be replaced within twelve hours or the tract may become obliterated. All kinds of fluid nourishment are borne well in these cases, preparations of milk, eggs, meat ground fine and mixed with fluid, carbohydrates in fluid form, etc. In none of his cases has Mayo observed subsequent ill effects from the jejunum becoming adherent to the peritoneum after the removal of the feeding tube.

97. **Chronic Cholecystitis.**—The following points are emphasized by Verbrycke. There are numbers of dyspeptics whose symptoms are due to gall-bladder disease. Diagnosis should be made early and treatment instituted before the occurrence of gall-stones if possible. Surgery is the only treatment for a certain class of cases. In all early cases, exclusive of those dangerously acute, medical treatment, according to the principles outlined above, should be tried before recourse to surgery. In a number an apparent cure will be effected, particularly if no stones have formed, and it is usually impossible to state whether or not stones are present. The medical treatment can do no harm in those patients who have not yet had symptoms of obstruction. If two attacks occur after treatment has been started there is still time for surgery, and an operation should then be performed. It is not advisable to give medical treatment further trials. In those cases which do finally come to operation the previous treatment will usually have put the patient in a better condition. The foregoing diet and medication should also be given in the postoperative treatment of those who require surgical intervention.

99. **Compression of Lung in Tuberculosis.**—In the cases in which Lapham has thus far employed the nitrogen compression method of treatment the indications for the operation were: Inability to arrest the process in fifteen cases; inability to hold a previous recovery in three cases; impatience to return to work and unwillingness to risk the uncertainty of symptomatic treatment in two cases; while in another patient the operation was done on purely theoretical grounds; and one case was referred expressly for the treatment.

There were three deaths and one failure in the fifteen cases, all of which were advanced and otherwise hopeless. One death was due to hemorrhage before the effects of the method could be obtained. This case was characterized by severe and persistent hemorrhages which constituted the indication for attempting the treatment. The second death was due to a violent exacerbation of an intestinal tuberculosis, together with an exaggerated course of tuberculin given after the patient left. The third patient left far too soon and was

afterward not properly cared for. The patient who did not improve still has a chance of recovery. She is gaining slowly and is in every way much better than before the attempt was made. The pleural cavity is filled with adhesions and there is an enormous, almost malignant development of the pleural collateral circulation. All of the others are doing well, and in all of them recovery could not have been made unaided.

Of the three patients unable to hold a recovery when made, one has been earning his living for over a year without the loss of a day's work, and the other two are in equally favorable condition. There were two cases of business men impatient to resume work, and unwilling to risk the slow and uncertain results of symptomatic treatment. It is too soon to prophesy, says Lapham, but the lungs of both are being successfully compressed, and she believes that within a year these men will return to work and be as free from the dread of a relapse as an anatomic recovery can make them.

100. **Leukemic Tumors of Breast.**—Very unusual features were presented by McWilliams and Hanes' patient. She complained, first, of a tumor of the breast, and probably referred any slight evidences of impaired health to this tumor, whereas the subsequent course of the disease and the autopsy show that the breast tumor was merely an incident in the leukemic process. The superficial lymph-nodes were never enlarged. The spleen was not palpable until late in the course of the disease. A study of the various blood-forming tissues reveals a transformation from the normal to a tissue in which one type of mononuclear cell greatly predominates. The patient developed toward the close a severe enteritis, and it is interesting that the type of cell which took part in the inflammatory exudate was the mononuclear cell seen elsewhere so abundantly, and not the polymorphonuclear leukocyte, a finding easily explained by the condition of the bone marrow, in which very few myelocytes were found.

102. **Value of Nitric Acid in Cauterizing.**—The principal object proposed in Bartholow's paper is to reaffirm in all its rigor and in a pointed manner, the rule that the application of *fuming* nitric acid is the most effectual means of destroying the "virus" of rabies in wounds, and that in all cases in which we fear its coexistence with a bite, it should be got rid of as far and as quickly as may be possible. To destroy the "virus" before it has germinated in the wound is the means sometimes of wholly avoiding the disease which it provokes. The technic is simple and direct, and entirely adapted to a particularly prompt mode of application. But, it has the high merit of paving the way for the subsequent success of the Pasteur treatment. Wounds made by rabid animals should not be sewed up; they should be allowed to bleed. Hence, the use of stitches, instead of caustics, washing and dressing, is a gross and gratuitous blunder; stitches being the means of fructifying the "virus" and very little to the purpose in wounds of this character. It is the destruction of the poison that counts, not the mere healing of a "solution of continuity."

103. **Poliomyelitis With Cortical Involvement.**—Clark summarizes the cerebral involvement in poliomyelitis on its anatomic-pathologic side as follows: There may be a disseminated encephalitis affecting not only the white substance of the pons and crura cerebri, but also the gray matter of the cortex and regions of the central ganglia. The process, in some instances, would seem to originate in the pia, thus furnishing an important document for the fact that in the epidemic disease the palsy or injury may be a cerebral instead of a spinal one. The random and often unilateral character of the lesion in the cortex is a parallel picture to the pure spinal types. Clark cites a case of poliomyelitis and epilepsy associated in the same patient. Attacks of grand mal epilepsy occurred regularly two or three times every three or four months since the attack of poliomyelitis. The evidence in the case pointed to the fact that this patient suffered a diffuse cortical injury at the onset of the poliomyelitis, leaving organic changes in the cortex producing his epilepsy. The epilepsy has responded illy to the usual hygienic plan of treatment so beneficial in pure idiopathics

Journal of Michigan State Medical Society, Battle Creek

April, XI, No. 4, pp. 211-266

107 Treatment of Fractures. C. H. Sample, Saginaw.
108 Disturbance of Function of Ear, Nose and Throat in Nervous Diseases. C. D. Camp, Ann Arbor.
109 Vaccine Therapy. W. T. Dodge, Big Rapids.
110 Unnecessary Colpotomy. J. J. Reycraft, Petoskey.
111 Case of Pellagra. L. W. Keyes, Whitehall.
112 Treatment of Trifacial Neuralgia by Deep Alcohol Injections. F. B. Tibbals, Detroit.

Proctologist, St. Louis

March, VI, No. 1, pp. 1-56

113 Diagnosis and Treatment of More Serious Forms of Colitis. P. L. Mummery, London.
114 Primary Mucous Colitis. P. Daniel, London.
115 Sacculitis of Large Intestine. H. Drummond, Newcastle-Upon-Tyne, England.
116 Treatment in Certain Common Rectal Diseases. Sir F. Wallis, London.

Journal of Cutaneous Diseases, New York

March, XXX, No. 3, pp. 119-178

117 Toxic Dermatoses. M. B. Hartzell, Philadelphia.
118 Influence of Anaphylaxis in Toxic Dermatoses. J. A. Fordyce, New York.
119 Some Toxic Effects in Skin of Disorders of Digestion and Metabolism. J. C. Johnston, New York.
120 Toxic Origin of Erythema Multiforme. H. G. Anthony, Chicago.

April, XXX, No. 4, pp. 179-234

121 Case of Acanthosis Nigricans. C. J. White, Boston.
122 Veronal Poisoning. S. Pollitzer, New York.
123 *Instance Indicating Connection Between Acne and Enlargement of Thyroid Gland. D. W. Montgomery and G. D. Culver, San Francisco.
124 Arsenical Cancer: Report of Case. U. J. Wile, New York.
125 Blood After Intravenous Injections of Salvarsan. G. M. MacKee, New York.

123. **Acne and Thyroid Gland.**—This case locally was not different from many other instances of severe acne of the papulo-pustular type with many comedones. During the two years that the authors had this patient under observation, periods of improvement and of exacerbation were so definitely associated with her manner of living and particularly with the water she drank, that they are convinced that her general condition was primarily at fault and that the acne was an external evidence of intricate internal disturbances. It may be, they suggest, that the water in question caused some disturbance of some of the internal organs such as the pancreas or suprarenals and that a compensatory activity of the thyroid gave rise to goiter and hyperthyroidism, which, in turn contributed to cutaneous erethism. Of the practical relationship between the taking of the suspected water in this case and the accentuation of the acne there is no doubt. When the patient took the water the acne grew worse; when she ceased the acne improved.

American Journal of Surgery, New York

April, XXVI, No. 4, pp. 129-160

126 *Vaginal Ptosis: Surgical Treatment. R. Elmergreen, Milwaukee, Wis.
127 Present Status of Conservative Work on Uterus, Fallopian Tubes and Ovaries. C. R. Hyde, Brooklyn.
128 Certain Gynecologic Aspects of Neurasthenia and Hysteria. E. Novak, Baltimore.
129 Surgical Essentials. F. E. Neef, New York.
130 Rôle of Male in Infertilitas Matrimonii. Q. W. Hunter, Louisville, Ky.
131 Surgical Removal of Tonsils. Finger Enucleation. F. A. Foster, New York.

126. Also published in the *Wisconsin Medical Journal*, March, 1912.

Mississippi Medical Monthly, Vicksburg

April, XVI, No. 12, pp. 231-250

132 Illusions and Idiosyncrasies in Treatment of Malaria. H. L. Sutherland, Benoit.
133 Indicanuria and Its Importance to General Practitioner. J. C. Herrington, Asylum.
134 Pellagra. E. G. Martin, Benoit.

New York Medical Journal

April 13, XCV, No. 15, pp. 729-780

135 Analysis of Results of Rhizotomy in Treatment of Spastic State of Cerebral Diplegia. L. P. Clark and A. S. Taylor, New York.
136 Physician and Masseur. J. M. Taylor, Philadelphia.
137 Treatment of Phymatiasis by Means of Continuous Bath. A. Rose, New York.
138 Physician as Business Man. S. Epstein, New York.
139 Diagnosis of Tumors of Female Breast. G. Barie, New York.

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140 *Symptoms and Diagnosis of Cancer of Body and Tail of Pancreas Suggestive Sign, with Report of Case. M. Packard, New York.
141 Leukoplakia Buccalis. R. H. Ivy, Philadelphia.
142 Homo: Pavilion of Man in Dresden. J. F. C. Luhan, New York.
143 Contribution to Study of Physiology and Pathology of Skeleton of Oral Extremity of Thorax (Stethographic Method). C. M. Desvernine, Havana, Cuba.

140. **Cancer of Pancreas.**—Carcinomatous growths of the pancreas, on account of the disturbance of pancreatic function, Packard claims give rise to a symptom complex that is peculiarly characteristic. The symptoms of cancer of the body and tail will depend on compression of the bile duct, but are due to alterations of the pancreatic tissue, and to involvement of the solar plexus. Packard emphasizes that one must never lose sight of pain, with its characteristic distress and prostration. The celiac neuralgia, together with the zone of tenderness to his mind, is certainly suggestive.

Louisville Monthly Journal of Medicine and Surgery, Ky.

April, XVIII, No. 2, pp. 321-352

144 Infantile Paralysis (Acute Anterior Poliomyelitis). C. Thompson, Louisville.
145 Treatment of Leukemia with Bacterial Toxins. L. K. Baldauf, Louisville.
146 Where Dental Surgeon and Rhinologist Meet. A. O. Püngst, Louisville.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Australian Medical Journal, Melbourne

February 10, I, No. 30, pp. 321-332

1 Retroperitoneal Hydatid Cysts. F. D. Bird.
2 *Ankylostomiasis in Ceylon. T. Fiaschi.

February 17, I, No. 31, pp. 333-344

3 Chronic Salpingitis. A. N. McArthur.
4 After-Effects of Salpingitis. F. Meyer.

February 24, I, No. 32, pp. 345-356

5 Acute Salpingitis. G. R. Adam.
6 Pathology of Salpingitis. H. B. Allen.
7 *Early Rising During Puerperium. R. T. Sutherland.
8 Hydatid Cyst Following Direct Implantation of Ovum of Taenia Echinococcus. T. S. Hutchings.

March 2, I, No. 33, pp. 357-368

9 Treatment of Inoperable and Operable Sarcomatous Growths by Coley's Fluid. R. B. Duncan.
10 Glaucoma. J. W. B. Barrett and W. F. Orr.
11 Symptoms of Vagal Involvement Following Diphtheria. M. Williams.
12 Dystocia Due to Hydatid Cyst in Pouch of Douglas. R. T. Sutherland.

2. **Ankylostomiasis in Ceylon.**—Of internal diseases a fairly common one in Ceylon is ankylostomiasis. This disease, even in the tropics, is frequently mistaken for simple anemia, general dropsy, malarial cachexia, or for beri-beri; hence the importance of examining early the feces for the ova. If these are found, Fiaschi says, the patient should be at once treated with thymol, using the well-known precautions necessary with such a powerful drug; but if too weak to stand this, Castellani gives the following combination:

R	Gm. or c.c.	
Olei Eucalypti	2	♏xxx.
Chloroformis	3	♏xlv
Olei Ricini	38	3x

One-half of this is given in the morning and the other half an hour later.

7. **Early Rising During Puerperium.**—For statistical purposes Sutherland took 200 consecutive cases of early rising, the date of rising ranging from the fourth to the eighth day. Of these 118 sat out on the fourth, thirty-eight on the fifth, seventeen on the sixth, ten on the seventh, and seventeen on the eighth day. Two were discharged on the ninth, 116 on the tenth, thirty-seven on the eleventh, nineteen on the twelfth, fourteen on the thirteenth, three on the fourteenth, eight on the fifteenth and one on the seventeenth day. One patient returned after ten days with uterine hemorrhage. A very small piece of placenta was found at the fundus and removed by the curette. She was quite well after. One patient fainted on sitting up in bed on the seventh day. One patient was giddy on sitting out on fourth day. One patient complained of backache on sitting up in bed on the second day. One patient died suddenly of pulmonary embolism on the thirteenth day while being discharged in the waiting room. She sat up on the seventh day, but had a temperature on the evening of ninth and tenth days of 103 F., and was then kept in bed. One patient complained of headache on the eighth day (sat out third day). One patient had shreds on tenth day (sat out sixth and discharged thirteenth day). One patient had placental tissue removed on the ninth day. One patient had triplets. Three had twins. Eight had forceps (4 per cent.). Five had post-partum hemorrhage. Four had inflamed breasts (2 per cent.). Twenty-eight required a uterine douche (14 per cent.). Sixty-one patients (30.5 per cent.) had a temperature of 99 F. or over at some period or other during the puerperium. If the patients are excluded in which the temperature was under 100 F. there remain thirty patients (15 per cent.) with temperatures of 100 F. or over at some period.

Lancet, London

March 30, I, No. 4622, pp. 849-910

13 *Paratyphoid Fever and Meat Poisoning. F. A. Bainbridge.
14 Different Forms of Human Electrocardiogram and Their Significance. W. Einthoven.
15 Case of Ruptured Kidney. A. Adams.
16 Salvarsan in Syphilis. D. Kennard and W. H. Gordon.
17 *Classification in Gynecology. W. E. Fothergill.
18 Sex of Larvæ of Mosquitoes. H. A. Adie.
19 *Abscess of Lung and Liver: Simple Cure of Chronic Case by Upside-Down Position. W. E. McKechnie.
20 Pulmonary Embolism as Sequel of Diphtheria. D. Stewart.

13. **Paratyphoid Fever and Meat Poisoning.**—The evidence which Bainbridge presents is offered as proof positive that meat poisoning and paratyphoid fever are distinct diseases. In the first place he says they are caused by different bacilli, which (though closely allied) can be distinguished by appropriate methods. Second, the distribution of the organisms which cause paratyphoid fever is quite unlike that of the organisms which cause meat poisoning. Third, paratyphoid fever is spread by human bacillary carriers, whereas meat poisoning results from the consumption of food which is derived from infected animals or is contaminated by animal agency. Finally, the clinical pictures of the two diseases are usually quite dissimilar. It is true that, on the one hand *B. paratyphosus* (A) and (B) have, although very rarely, been met with in cases of acute gastro-enteritis, and that, on the other hand, the illness following the consumption of meat infected with Gaertner's bacillus or *B. suipestifer* may take the form of pyrexia lasting two or three weeks. But Bainbridge does not attach much importance to these exceptional cases, partly because they are exceptional, but still more because abdominal infections seem unusually liable to variability in their clinical manifestations, a case in point being enteric fever. It may, however, he continues, be admitted that the boundary-line between meat poisoning and paratyphoid fever is less well defined in regard to their clinical character than in regard to their epidemiology, and possibly they may eventually prove to be more nearly akin in some respects than now seems to be the case.

17. **Classification in Gynecology.**—For some years Fothergill has been using six main divisions in clinical teaching and in his own work. They were suggested to him by the arrangement of specimens introduced by Lorrain Smith into the pathologic museum of the University of Manchester, and thus have the sanction of professional pathologists. They are: (1) Developmental Errors; (2) Vascular Changes; (3) Mechanical Conditions; (4) Results of Infection; (5) Progressive Conditions; and (6) Retrogressive Conditions. 1. "Developmental Errors" contain two sub-groups: (a) congenital errors, and (b) errors in development at puberty. 2. "Vascular Changes" includes active and passive hyperemia as recognized at first by symptoms and later by hypertrophy and fibrosis, respectively. This group also includes varicosity of the veins in the pelvis and hemorrhage into the pelvic organs, the pelvic cellular tissue, and the peritoneal cavity. 3. "Mechanical Lesions" is a large and obvious group containing injuries, displacements and hernias. 4. "Results of Infection" is a main division which is to be subdivided

according to the organisms present in each case. In this group the few cases of primary pelvic parasitic disease may be included without gross impropriety. 5. "Progressive Conditions" includes overgrowths, cysts and new growths. Perhaps this group should be divided. But it is hard to draw the line between hypertrophy and adenoma of the endometrium or between innocent and malignant new growths. 6. "Retrogressive Conditions" occur mainly in connection with the menopause, but the reproductive organs share in the general changes of senility.

19. **Abscess of Lung and Liver.**—From the character of the pus in this case, the practically aseptic condition and the physical signs, McKechnie diagnosed liver abscess with perforation of diaphragm and pleura and secondary abscess in the base of the lung, with adhesion of lung, liver and pleura to the diaphragm in the neighborhood of the perforation; with intermittent partial evacuation of the cavities in the liver and lung *via* the bronchi and trachea. It appeared that the cavities were only partially emptied by fits of coughing when, after filling up, the pus began to rise in the bronchi, causing irritation by its hydrostatic pressure on the lung and liver and its presence in the healthy parts of the bronchi. That this surmise was probably correct was shown by the fact that when McKechnie began treatment by inverting the patient, at once a very large quantity of pus was evacuated, a full breakfast cupful, a quantity greater by far than he had been in the habit of evacuating by any one spasm of coughing. He made the boy hang suspended over the edge of a table, head downward, the whole body hanging vertically upside down, the legs and thighs lying on the table at right angles to the body and thus supporting him. In this position he was made to cough and squeeze his chest till no more pus came out. By this means the abscess cavity was completely emptied, and he was made to repeat the process five or six times a day. In about six weeks he ceased to have pus and was cured.

Australasian Medical Gazette, Sydney.

February 17, XXXI, No. 7, pp. 149-176

21 •Neurasthenia. C. Allbutt.
22 Treatment of Mental Disease in Early Stage. J. M. Mosher.
23 Ocular Hygiene of Schools. G. H. Hogg.

February 24, XXXI, No. 8, pp. 177-208

24 Disease of Man Spread by Insects. A. G. Butler.
25 •Stramonium Poisoning. H. H. Parkinson.

March 2, XXXI, No. 9, pp. 209-236

26 Experimental Leprosy. J. A. Thompson.
27 Criminal Abortion. P. H. Kenny.
28 Case of Ruptured Kidney. R. N. Rockett.

March 9, XXXI, No. 10, pp. 237-260

29 Government Ophthalmic Hospital, Madras. T. Smith.
30 Tumors Met with in General Practice. W. S. Sweet.
31 Absence of Zygomatic Arch. H. G. Holmes.

21. **Neurasthenia.**—Drugs, says Allbutt, play a subsidiary part in the cure of neurasthenia; though, of course, on the other hand, for occasional uses they are indispensable. Constipation often yields, with but little drug assistance, to skilful abdominal massage. The so-called "tonics" are useful incidentally. In convalescence the advance from occupation to occupation, from exercise to exercise, needs the greatest discretion, for, in contrast with hysteria, a chance excess of work may undo the advantage of many weeks' improvement. A very large part of convalescent occupation should be manual rather than mental work. It is well, as soon as may be, to arrange for the convalescent exercises with cheerful companions; and a quick eye will learn to perceive when rest is degenerating into dawdling and coddling, and when a cautious return to activity is required. For in many of these patients moral education is as important as the physical; in children and young adults the moral education is of the utmost importance; in older persons, habits good and bad are too often fixed and permanent; thus it is very important not to let the child hear what has been called the "formula of his defects," lest he act up to the character, and so fix his more fluid dispositions on perverted lines.

25. **Stramonium Poisoning.**—Parkinson could find out nothing about the toxic effects of stramonium. He simply treated the symptoms. Hydrochloric acid was given, as stramonium is incompatible with mineral acids. Opium was used as a sedative, and to prevent tenesmus should diarrhea come on as he anticipated. Aconite was given to slow the heart's action.

British Medical Journal, London

March 30, I, No. 2674, pp. 709-764

32 •Skin Rashes in Children. J. L. Bunch.
33 Late Syphilitic Glossitis Treated by Salvarsan (Ehrlich-Hata). Sir M. Morris.
34 Sixteen Months' Experience of Salvarsan. G. G. S. Stopford-Taylor and R. W. Mackenna.
35 Cases of Chronic Purpura With and Without Cutaneous Lesions. F. H. Edgeworth.
36 Leishmania Donovani and Leishmania Tropica. R. Row.
37 Epithelioma of Hand and Glands; Removal of Two Fingers and Glands. R. Parker.
38 Acute Poliomyelitis (Heine-Medin's Disease). R. M. Hewitt.
39 Acute Anterior Poliomyelitis in Southwest Norfolk. G. F. Cross.
40 Serum and Vaccine Therapy in Connection with Diseases of Eye. C. W. G. Bryan.

32. **Skin Rashes in Children.**—As regards treatment of pityriasis rosea Bunch advises a soap and water bath every day, or, if there is any itching, a starch or alkaline bath should precede the application of any lotion or ointment. The following lotion may be ordered:

R	Gm. or c.c.		
Glycerini acidi carbolici	66		℥x
Sodii bicarbonatis	66	or	gr.x
Boracis	33		gr.v
Aq. Dest. ad	30		℥j

or

R	Gm. or c.c.	
Liq. Sodii chlorinatæ	2	℥xxx
Spiritus lavandulæ	8	℥ij
Aq. Dest. ad	30	℥j

If an ointment, one containing 15 grains of either or both to the ounce of vaseline, may be ordered; or an ointment containing yellow mercuric oxid and resorcin may be made up with lanolin and lard. Under such treatment Bunch says the disease tends to disappear in about a month.

Bristol Medico-Chirurgical Journal

March, XXX, No. 115, pp. 1-96

41 Appreciation of Lord Lister. R. Roxburgh.
42 Direct Laryngoscopy, Bronchoscopy and Esophagoscopy. P. Watson-Williams.
43 Chronic Interstitial Pancreatitis of Uncertain Origin. J. M. Clarke.
44 Operations on Uterus and Appendages During Pregnancy. W. C. Swayne.
45 Cases Illustrating Difficulty and Importance of Early Diagnosis in Acute Intestinal Obstruction. E. W. H. Groves.
46 Tuberculosis of Nose and Pharynx. A. J. Wright.
47 •Gall-Bladder Cases Presenting Features of Interest. E. H. E. Stack.
48 •End-Results of Forty-One Operations for Internal Derangements of Knee-Joint. A. R. Short.

47. **Gall-Bladder Cases.**—The points of interest referred to by Stack are 1. An advanced condition of cholecystitis, with dense adhesions or even pus in the gall-bladder, may be present in patients who have never had to leave off their ordinary duties. 2. Histories typical of gall-stone colic may be present in patients when there is nothing amiss with their biliary apparatus, as in the pancreatic and hydatid cyst cases. 3. A very large calculus can be present in the common duct without there ever having been jaundice. 4. In acute pancreatic disease, if the patient lives some time, the digestive action of the discharge in retarding healing is very marked. 5. Six weeks may elapse after an operation before bile begins again to enter the intestine. 6. Gall-stones can simulate cancer in all its symptoms, except, of course, those due to metastasis.

48. **Operations for Internal Derangements of Knee-Joint.**—During the ten and a half years from January, 1901, to July, 1911, there have been treated by operation at the Bristol Royal Infirmary fifty-six patients with internal derangement of the knee-joint out of a total of 22,782 surgical in-patients. Of these it has been possible to obtain an after-history in forty-one instances. In twenty cases there was an obvious tearing or loosening of one or other semilunar cartilage; in two it was the external and in eighteen the internal that was

at fault. The abnormalities were very various. In seven cases the internal cartilage was split. In three cases the internal cartilage was not torn, but very loose. There were one or two instances of each of the following: Anterior end torn free (2), posterior end torn free (2), external cartilage left attached only at ends (2), internal cartilage torn across middle (1), left attached only at ends (1) or only in front (1), anterior part torn away from capsule except at the extreme end in front (1). The loose bodies were usually composed of bone and cartilage (5 cases) or cartilage only (4 cases). In one instance the body was derived from the internal semi-lunar cartilage; in several cases it was noted that there was a depression on the femur from which a piece of bone and cartilage had separated. In several cases there was a loose fibrous attachment. In one knee the loose body was organizing blood-clot. Once there were two bodies present, and such difficulty was experienced in getting hold of the second that it had to be left. No after-history is available.

The relation to injury was very definite in nearly all cases. It is precisely stated that in nine patients the cause was a football accident, and in another the game of hockey. Probably there were others besides these. Of the whole series of forty cases, excluding one in which the clinical picture was quite unlike that characteristic of internal derangement: In twenty-five the result is described as excellent. In seven the result is described as good. In four the result is described as fair. In four the result is described as bad. No patient died as a result of the operation. Where a damaged cartilage was found and removed the operation was extraordinarily successful, and there was not a single failure. On the other hand, when a loose body was removed, there were three unsatisfactory results, and only two quite recent cases could be classed as excellent. Six patients mention that they are now able to play football again, several are miners, and one is a sailor. One miner is able to do his work without inconvenience after removal of a cartilage from both knees.

Annales de Gynécologie et d'Obstétrique, Paris

March, XXXIX, No. 3, pp. 129-192

49 Evolution of the Practice of Obstetrics. (De l'évolution de l'obstétricie et de ses rapports mutuels avec l'évolution sociale.) A. Pinard.
50 *Delivery in the Tabetic. (Tabes et puerpéralité.) A. Fruhinholz and A. Rémy.
51 *Infection of the Cervix During Labor. (L'infection du col pendant le travail et la rigidité secondaire des bords de l'orifice utérin.) Potocki and Sauvage.
52 *Serotherapy in Uncontrollable Vomiting of Pregnancy. (Vomissements graves de la grossesse et sérum de femme enceinte des premiers mois.) G. Fieux and A. Dantin.

50. **Delivery in the Tabetic.**—Observation of the influence of a pregnancy on the progress of the tabes has shown that in some cases it has aggravated, in others favorably modified, the course of the tabes, and in others no influence was apparent. Few realize the importance of examining for signs of tabes in cases of uncontrollable vomiting in pregnant women; but not until tabes has been excluded should the diagnosis of a purely pregnancy process be accepted. In a case reported in detail a iv-para of 36 was spontaneously and painlessly delivered of a healthy boy, free to date—over two years—from any signs of inherited taint. The contractions of the uterus proceeded normally in all the cases of the kind on record, although the patients were unaware of them, and delivery was physiologic.

51. **Masked Infection of the Cervix During Labor.**—Potocki and Sauvage warn that when the edges of the os become rigid from infiltration during labor, this is a sign that the cervix is infected and thus is a danger signal. It is generally assumed that this infiltration is of mechanical origin but their research has disproved this, and they emphasize that the discovery of secondary rigidity of the lips of the os should impose hysterectomy as the only means to ward off serious trouble from the underlying infectious process already set up.

52. **Serotherapy in Vomiting of Pregnancy.**—Fieux and Dantin report the case of a iii-para of 26 who developed uncontrollable vomiting early in her latest pregnancy and her condition became alarming by the fourth month. A subcutaneous injection was then made of 3 or 4 c.c. of serum from a healthy woman approaching the third month of pregnancy. Improvement was apparent at once, and after a second similar injection—using 12 c.c. this time—there was no further tendency to vomit. No other measures were applied after the serum was injected, and the patient was given the usual diet. Le Lorier reported last July a similar case, but the immediate improvement in these cases may have been a mere coincidence. (Mayer's report of improvement of toxic pregnancy skin affections under this form of serotherapy was published in THE JOURNAL Oct. 21, 1911, p. 1415.)

Annales de l'Institut Pasteur, Paris

February, XXVI, No. 2, pp. 82-159

53 Factors of Bacterial Toxicity. II. (Etude des bacilles de Preisz-Nocard.) M. Nicolle, G. Loiseau and P. Forgeot.
54 Serodiagnosis of Infection with Preisz-Nocard Bacilli. (Nouveau procédé de diagnostic des infections à bacilles de Preisz-Nocard.) P. Forgeot and E. Cesari.
55 Chickens Brought Up Free from Microbes. (Expériences sur la vie sans microbes.) M. Cohendy.
56 The Destruction of Red Corpuscles in Spleen and Liver. (La destruction intrasplénique et intrahépatique de corpuscules rouges du sang dans les conditions normales et pathologiques.) I. I. Lintvarev

Archives des Maladies du Cœur, etc., Paris

March, V, No. 3, pp. 163-224

57 Heart and Venous Pulse Tracings While Reclining on Left Side. (Les avantages de l'inscription simultanée systématique du cardiogramme en décubitus latéral gauche et du pouls veineux.) E. Pezzi and H. Sabri.
58 Extrasystoles Without Compensating Repose. H. Busquet.
59 Experimental Syphilitic Arteritis. (Recherches expérimentales sur les artérites et les anévrysmes syphilitiques.) F. Vanzetti.

Archives Mensuelles d'Obstetrique et de Gynécologie, Paris

March, XVII, No. 3, pp. 225-304

60 *Cultures of Lactic-Acid Bacilli in Local Treatment of Puerperal Infection. (Les cultures de bacilles lactiques dans le traitement de l'infection puerpérale.) A. Brindeau.
61 Rupture of the Dura in the Newly Born. (Les ruptures de la dure-mère cranienne chez les nouveau-nés.) L. Meyer and E. Haugh.
62 Placenta Antibodies. (Les anticorps placentaires dans le sang de la femme gravide.) P. Bar.
63 *Ultimate Outcome of Cesarean Section. (Le pronostic éloigné de l'opération césarienne classique.) M. Marioton.

60. **Lactic-Acid Bacilli in Local Treatment of Puerperal Infection.**—Brindeau declares that cultures of lactic-acid bacilli are valuable for sterilizing any tissue, not merely the intestines alone to which their use hitherto has been restricted. It is logical, for lactic acid is a powerful and non-toxic antiseptic. The cultures prevent the development of pathogenic species and promote leukocytosis, while the lactic-acid bacilli never become pathogenic. The cultures can be used to sterilize any septic or putrid wound, but their main field is for infected vulvoperineal tears after delivery. He mixes the contents of a culture vial with sterilized milk sugar and injects the soft mass into the vagina and applies wicks of gauze directly to the wound, renewing the dressing three times a day for two days. The action is quicker the more concentrated the culture, so he centrifuges it to collect the bacteria for an urgent case. He gives the details of fourteen cases of puerperal endometritis, fifteen of vulvovaginal tears, seven of mammary abscess, four of postoperative fistula, three of vaginal hysterectomy, two of puerperal peritonitis, one of the Porro operation and four of other operations, all confirming the efficacy of lactic-acid bacilli in cleansing, sterilizing and promoting healing of infected wounds.

63. **Repeated Cesarean Section.**—Marioton states that Bar has delivered twenty-four patients who had previously undergone cesarean section, and in all but one case it was necessary to deliver the child by repeating the cesarean section. The uterus did not rupture in any instance, but Marioton has found records from three other clinics showing spontaneous rupture in from about 2 to over 18 per cent. in thirty-nine, twenty, and eleven cases, while four other clinics report no ruptures. In the total 157 cases of pregnancy following cesarean section in the total eight clinics, rupture occurred thus in 2.54 per cent. Experience teaches the necessity for making the second cesarean section early, before labor has

commenced. The greatest prudence is necessary also in selecting the cases suitable for cesarean section. It should be done only in those free from risk of infection.

Bulletin de l'Académie de Médecine, Paris

March 12, LXXVI, No. 11, pp. 193-212

64 *Treatment of Undescended Testicle. (Procédé d'orchidopexie.) C. Walther and C. Monod.

64. **Treatment of Undescended Testicle.**—The special feature of Walther's technic is that the spermatic cord is mobilized as far up as possible and the testicle is drawn down and slipped into the other half of the scrotum through a small slit made for it in the septum. The slit is then sutured on each side of the spermatic cord, so that the testicle is held firmly in its new bed by the elastic force of the septum. He leaves the cord entirely free; the traction from the testicle below gradually stretches it. The testicle itself is also left free in its new bed. He has applied the method in over thirty cases and thirteen of the patients have been recently reexamined after an interval of a few months to over nine years, all confirming the excellence and permanency of the results.

Presse Médicale, Paris

March 20, XX, No. 23, pp. 229-236

65 Technic for Sphygmomanometry. E. Enriquez and J. Cottet.

Archiv für klinische Chirurgie, Berlin

XCVII, No. 3, pp. 515-830. Last indexed April 6, p. 1044

66 Leontiasis and Fibrous Ostitis. (Ueber Leontiasis ossea und Ostitis fibrosa.) Bolt.

67 Anastomosis Between Bile Ducts and Intestines. (Ueber Gallenweg-Darmverbindungen.) W. Kausch. Commenced in No. 2.

68 *Operative Treatment of Suppurative Meningitis. (Die Operation der eiterigen Meningitis.) S. Kostlivy.

69 Causes of Spontaneous Gangrene. (Zur Pathogenese der sogenannten spontanen Gangrän.) T. Todyo.

70 Fascia Flap to Close Defect in Trachea. (Deckung von Trachealdefecten durch eine freie Plastik aus der Fascia lata femoris.) H. Levit.

71 *Fracture of the Skull. (Die Schädelfracturen und ihre Behandlung mit besonderer Berücksichtigung der primären Schädelplastik—Reimplantation.) W. Schaack.

72 Iodid as Factor in Exophthalmic Goiter. (Erzeugt Jodeinspritzung Morbus Basedow?) O. Bardenheuer, H. Klose and R. E. Lieseguug.

73 *Experimental Surgery of the Heart. (Versuche zur Herzchirurgie.) E. Schepelmann.

74 *Roentgenotherapy of Skin Cancers. (Die Röntgenbehandlung der Hautcarcinome, speciell des Basalzellenkrebses; sein histologisches Verhalten vor und nach der Bestrahlung.) H. Körbl.

75 Technic for Gall-Stone Operations. (Ueber den Bauchdeckenschnitt, die Bauchnaht und die Tamponade bei Gallensteinoperationen.) O. Sprengel.

76 The Laparotomy Incision. (Zur Frage des Bauchdeckenschnittes.) W. Körte.

68. **Operative Treatment of Suppurative Meningitis.**—Kostlivy reports a case of suppurative meningitis following fracture of the occipital bone in a man of 52 and one following otitis media in a boy of 13, in both of which the accumulation of pus under the dura was evacuated, with the recovery of the boy and marked improvement in the other case. The progress of the meningitis in the latter case, however, was only temporarily arrested; the patient succumbed three weeks later with symptoms of progressive dementia and necropsy showed general atrophy of the brain, the meninges clean and smooth except where fresh granulations had formed around the trephined portion. It is probable that the trauma in this case had been due to the preexisting atrophy of the brain. In both cases the operative treatment may be regarded as having been successful and proved its usefulness. The site for the trephining must be determined by the trauma or the ear affection, or possibly repeated puncturing by the Neisser-Pollack technic may be necessary to locate the best point for the operation. In both the above cases the cerebrospinal fluid obtained by lumbar puncture was very turbid, and the changes found in the meninges at the operation were of the severest nature. In another case a man of 40 with a chronic otitis media was hit on the head with a potato during a brawl and the discharge from the ear increased, with much headache, and a radical mastoid operation was done. Recovery was apparently smooth for nearly three weeks when fulminating suppurative meningitis developed suddenly and proved fatal in a few hours. The meningitis was metastatic in this case, a small focus on the other side of the head, while the original focus was clean and smooth. Kostlivy's experience has been that there is less tendency to prolapse of the brain when a considerable area is exposed than with a small trephine opening. In one case he made two small openings and thinks that this facilitated drainage. In both his cases there was oozing for a long time; even if merely the local exudation is drained away, this removes septic matters and prevents their spreading to adjacent regions.

71. **Fractures of the Skull.**—Schaack reviews the experiences with 530 cases of fracture of the skull at the Obuchow hospital in St. Petersburg. In eighteen cases the broken off pieces of the skull were reimplanted and the results confirm the superior advantages of this measure. Fourteen of the patients made a smooth recovery. In the 166 cases of fracture of the base of the skull the mortality was 61 per cent.; treatment here can be only conservative and symptomatic. The prognosis is much better with fracture of the convexity of the skull; the mortality was only 25 per cent. in the 206 cases of this kind in which an operation was attempted among the total 364. In fourteen of the cases local anesthesia sufficed. The mortality in the fatal cases was almost exclusively the result of the injury to the dura from the accident. When the brain is injured too, the prognosis is still graver; the mortality was 56 per cent. in his fifty-six cases of this kind, nearly all the patients succumbing to suppurative meningitis.

73. **Experimental Surgery of the Heart.**—Schepelmann gives an illustrated description of some experimental work in this line, the chordæ tendineæ or some valve being cut with a special chordotome he has devised, or the superior venæ cavæ being ligated in the rabbit and dog. His experience with eighteen rabbits and eighteen dogs has shown that the heart is too weak in older animals, accustomed to life in captivity, to stand such an operation, but that young vigorous animals bear it with comparative ease. The tissues of the heart were so friable in the older animals in captivity that the sutures would not hold.

74. **Roentgenotherapy for Cancer of the Skin.**—Körbl reports the results of exposures to the Roentgen rays in 140 cases of superficial cancer during the last six years at von Eiselsberg's clinic at Vienna. Seventy-three of the patients have been reexamined recently, and he summarizes the details of each in this group. Twenty-eight of the patients have had no signs of recurrence since; but in thirty-seven cases the cancer has returned. In eight cases the cancer seemed to be rebellious to the rays, no effect from the exposures having been apparent at any time. The interval since the exposures in the twenty-eight cases of apparent cure has been six years in two; five years in two; four years in six; three years in five; two years in four, and one year in nine. The principle for treatment is to urge radical surgical measures in every case. But if the patient absolutely refuses or is of very advanced age or other conditions forbid a radical operation, then roentgenotherapy is applied. In every case an exploratory excision of the growth is made and if the findings indicate an epithelioma then the radical operation is insisted on most strenuously. In four cases the recurrence of a basal cell carcinoma was different histologically from the original cancer, being more like an ordinary epithelioma. This transformation of a basal cell carcinoma into a growth of the ordinary epithelióma type has been observed so far only when the original growth has been exposed to the Roentgen rays, but it suggests that these cancers are of equally malignant nature with the other epitheliomas, and consequently require radical excision just as much as the others.

Beiträge zur klinischen Chirurgie, Tübingen

March, LXXVIII, No. 1, pp. 1-154

77 *External and Internal Secretions Studied by Injecting Stain Into Living Animals. (Die äussere und innere Sekretion des gesunden und kranken Organismus im Lichte der vitalen Färbung.) E. E. Goldmann.

78 Mouse Carcinosis. (Verhalten der Lymphgefässe bei experimentell erzeugter Peritonealcarcinose der Maus.) H. M. Evans.

79 Etiology of Talipes Cavus. (Zur Aetiologie des Klauenhohlfusses.) F. Geiges.
80 Pulsion Diverticulum of the Esophagus. (3 weitere Fälle von zweizeitig operierten Pulsionsdivertikeln des Oesophagus.) F. Geiges.

77. **Study of the Vital Processes by Diffuse Incorporation of a Stain.**—It is now two years since Goldmann called attention to the remarkably instructive findings in regard to secretions, both external and internal, when a living animal is injected with a stain. It soon becomes incorporated and participates in the vital processes. (See THE JOURNAL, Oct. 2, 1909, p. 1140). He here reports further research in this line, his monograph filling 108 pages, blazing the way and building the roadway for further investigators to go on beyond the point he has reached. His work was done with rats and mice; the stain used was isamin blue, and he gives thirty colored plates of the findings showing the biochemistry learned by this means in regard to the ovum, placenta, embryonal tissue, the histochemistry of the peritoneum, the fate of injected substances, of induced infections and degenerative processes, intoxications, the healing of wounds, tumors, etc., and vital processes in general. Among the new conceptions gleaned from this research is the close analogy between the fetus and a cancer, especially in the avidity and force with which each takes up substances from the maternal organism. Only one organ displays any power in this line even approximating that of the placenta; this organ is the liver. The findings with vital staining of the liver suggest, Goldmann says, that substances which have a toxic influence on the liver might have an influence on malignant growths.

Berliner klinische Wochenschrift

March 18, XLIX, No. 12, pp. 533-580

81 Cultivation of Living Tissues Outside of the Organism. A. Carrel.
82 Plastic Surgery. (Demonstration zur plastischen Chirurgie.) R. Mühsam.
83 *Cramp of the Iris. (Beschreibung von periodischem Auftreten einer wandernden Pupille.) A. Erlenmeyer.
84 Fever from Excessive Thyroid Functioning. (Temperaturerhöhung bei Hyperthyreoidismus.) H. Stern.
85 *Dissolved Albumin in Stomach Content with Cancer. (Beitrag für die diagnostische Verwendbarkeit des Gehaltes an gelöstem Eiweiss bei Achylia gastrica.) K. Thiele.
86 *Potassium in Treatment of Gout. (Bedeutung des Natriums und Kaliums für die Entstehung und Heilung der Gicht, mit Berücksichtigung des Radiums. Nach Tierversuchen.) S. Cohn.
87 *Composite Roentgenogram of Moving Object. (Polygramme, eine neue Art Röntgenbilder zur Darstellung von Bewegungsvorgängen.) M. Levy-Dorn and M. Silberberg.
88 Five Cases in Which an Artificial Common Bile Duct Was Made from Simple Rubber Drain. (Bildung eines künstlichen Choledochus durch ein einfaches Drainrohr.) M. Wilms.

83. **Recurring Ameboid Movements of the Pupil.**—In Erlenmeyer's case a woman of 48 had attacks at times of what he calls "wandering pupil." During about twenty seconds the pupil spread and twisted, becoming oval and then stretching out long, with the longest axis slanting or transverse. He compares the movements to those of the ameba and explains them as a hysteric clonic spasm of the iris.

85. **Albumin in Stomach Contents with Cancer.**—Thiele reports experiences which confirm the diagnostic value of the discovery of diasolved albumin in the stomach content one hour after the Ewald test-breakfast. The response was constantly negative in his fifteen cases of benign achylia and as constantly positive in his twelve cases of gastric cancer. The series include three border cases with intermediate figures. The simple test is made by diluting the stomach content with distilled water, 1 to 10; 0.5 to 10; 0.25 to 10; 0.05 to 10, and 0.025 to 10. Then 1 c.c. of the reagent is placed carefully on top of the mixture in each of the six beakers in turn. The first beaker in which no turbid zone forms on addition of the reagent is accepted as the index for the findings, designated by the dilution 10, 20, 40, 100, 200 and 400. In Thiele's three border cases the index was 100; in the cancer cases constantly 200 or 400, while in the benign achylia cases the index was from 10 to 40 in the majority, reaching 60 in a single case. The technic was described in THE JOURNAL July 8, 1911, p. 173. The reagent is a solution of 0.3 parts phosphotungstic acid; 1 part hydrochloric acid, 20 parts 96 per cent. alcohol, and 200 parts water.

86. **Sodium in Origin of Gout.**—Cohn presents arguments and relates experimental and clinical experiences which he thinks justify the conclusion that gout is the result of derangement of the metabolism of sodium and potassium and suggest that abstention from sodium is an important therapeutic measure. Potassium, on the other hand, counteracts the injurious influence of the sodium and should be given systematically. He has taken the potassium salts himself and given them to patients for weeks and months at a time and never witnessed any injurious by-effects, while they displayed a marked influence in attenuating the gouty process.

87. **Polygrams of Moving Organs.**—The principle of the moving picture is applied by Levy-Dorn and M. Silberberg, only they make the two or three exposures all on the same plate without changing it. The resulting composite picture shows the varying outline of the organ at the different periods, and gives instructive oversight of the motor conditions as they show by a number of examples.

Correspondenz-Blatt für Schweizer Aerste, Basel

March 20, XLII, No. 9, pp. 321-368

89 *Poisoning from Food. (Einige Fälle von Nahrungsmittelvergiftungen.) H. Reinhold.

89. **Poisoning from Food.**—Reinhold reports three paratyphoid epidemics following the eating of meat or fish. The disturbances suggested cholera, the diarrhea, colics, vomiting, prostration and apathy. A number died of those affected, but necropsy revealed merely hyperemia and extravasation of blood in the intestinal mucosa. Differentiation was possible only by the agglutination test, as the presence of a few paratyphoid bacilli in the stools is no sign of paratyphoid infection. He urges physicians to inquire into the history of the case, the food eaten and its origin, examine the excreta, and test for agglutination in all suspicious cases. He would like to have his country adopt the German law requiring declaration of all such cases.

Deutsche medizinische Wochenschrift, Berlin

March 21, XXXVIII, No. 12, pp. 537-584

90 Traumatic Neuroses. (Begutachtung der nervösen Unfallerkrankungen sowie der nervösen Beamten.) A. Cramer.
91 *Problems in Chemotherapy. F. Blumenthal.
92 Salvarsan in Anthrax. (Neuere Gesichtspunkte in der Milzbrandtherapie.) G. Becker.
93 Salvarsan in Malaria. (Behandlung der Malaria mit Salvarsan.) M. Tuschinsky.
94 Mushroom Poisoning. (Kasuistischer Beitrag zur Kenntnis der Pilzvergiftungen.) J. Schurer.
95 *Roentgenoscopy and the Tryptophan Reaction in Diagnosis of Gastric Cancer. (Leistungen des Röntgenverfahrens und der Glyxyl-Tryptophanreaktion für die Diagnose des Magenkarzinoms.) C. Kayser.
96 Case of Recovery from Tuberculous Meningitis. (Heilbarkeit der tuberkulösen Hirnhautentzündung.) Hochstetter.
97 Effect of Heated Term on Infants and Older Children. (Einwirkung der Sommerhitze auf Säuglinge und ältere Kinder.) E. Schlesinger.
98 Periodically Recurring Parotitis; Two Cases. (Periodische Speicheldrüsenschwellungen.) C. Luders.

91. **Chemotherapeutic Problems.**—Blumenthal reports years of research on the affinity of different drugs, especially arsenic and mercury, for the various tissues and whether certain preparations of the drugs possess more of an affinity to certain tissues and whether this affinity can be influenced from without. His findings supply a basis for certain empirically learned facts and explain others. Among the points thus learned is that the combination of an iodid with an arsenic preparation serves to promote the transportation of the arsenic to the tissues—the iodid thus proving an efficient conveyor for arsenic. It acts entirely different with mercury, hastening its evacuation, the iodid in this case conveying the mercury out of the system.

95. **Diagnosis of Gastric Cancer.**—Kayser states that the experiences at the Strasburg policlinic in charge of E. Meyer have confirmed the importance of the aid in diagnosis of cancer from roentgenoscopy and the glycyl-tryptophan reaction. They permitted in some cases detection of gastric cancers which had eluded all other means of investigation. Positive findings with the tryptophan test render cancer highly probable, but negative findings do not exclude it unless the test has been applied several times. With much retention, the response is less pro-

nounced, and consequently it is important to rinse out the fasting stomach before the Ewald test-breakfast, watching, however, to see that bile pigments, blood and tryptophan itself do not get into the stomach when this is done. He tabulates the findings of the tryptophan test, applied in fifty cases strictly according to Neubauer and Fischer's technic, including seventeen patients with known cancer. In three cases everything pointed to cancer except the negative tryptophan test, and an exploratory laparotomy confirmed its findings. With certain cancer, the reaction was positive in fourteen and negative in three cases, while it was constantly negative in all the other thirty-three cases of a gastric affection which proved to be non-malignant. (A recent article on this test was published in THE JOURNAL April 6, 1912, p. 1008.)

Medizinische Klinik, Berlin

March 24, VIII, No. 12, pp. 471-512

99 *Syphilitic Disease of the Aorta. (Die syphilitische Erkrankung der Aorta.) A. Goldscheider.
100 Importance, Diagnosis and Treatment of Disease of the Nasal Sinuses. (Nasennebenhöhlenciterungen.) E. Wertheim. Commenced in No. 11.
101 *Primary Ethyl Chlorid Anesthesia. (Der Chloräthylrausch und seine Bedeutung für die Praxis.) A. Stieda and P. Zander.
102 Advantages of Carbon Dioxid Snow in Dermatology. (Ueber die Darstellung des Kohlensäureschnees und die Anwendung desselben in der Dermatologie.) L. E. Merian.
103 *Differential Diagnosis of Gastric Achylia and Cancer. (Zur Differentialdiagnose zwischen Carcinoma ventriculi und Apepsia simplex.) G. Einstein.
104 Salvarsan and Latent Microbism. J. Ruhemann.
105 Tincture of Iodin for Sterilization of the Skin. (Die Hautdesinfektion mit Jodtinktur.) Pickenbach.
106 *Whooping-Cough. (Zur Frage der Versorgung stickhustenkranker Kinder.) A. Galisch.

99. **Syphilitic Disease of the Aorta.**—Goldscheider states that the prevalence of involvement of the aorta is still underestimated. During the last two years he has encountered ninety-seven cases in his private practice and forty-nine in the policlinic. His experience confirms anew the favorable influence of specific treatment on the syphilitic affection of the walls of the aorta. Small aneurysms may retrogress entirely and medium-sized ones to a certain extent, but little effect can be anticipated in the cases of very large aneurysms; here benefit is exceptional. Iodid treatment alone never displayed any appreciable influence on syphilitic aneurysm of the aorta in his experience. General hygiene is especially important; in two of his cases carelessness in this line on the part of the patients interrupted the progressing improvement and put the patients back in their old condition. He is confident that by repeating the course of specific treatment from time to time the patient's life can be materially lengthened if he takes the proper precautions.

101. **Primary Ethyl Chlorid Anesthesia.**—Stieda and Zander have done over a thousand minor operations during the last year under anesthesia induced by the first whiffs of ethyl chlorid. They commend it as a convenient and effectual mode of anesthetizing for a brief operation. The operator must resist the tendency to give more of the ethyl chlorid than is necessary; the fact that the patient retains his consciousness is misleading in this respect. From 20 to 40 drops suffice for women and children; men may require up to twice this.

103. **Diffefential Diagnosis of Cancer and Simple Achylia.**—Einstein has been studying the amounts of dissolved albumin in the stomach content which Wolff and Junghaus assert are characteristic for cancer. (Their statements were summarized in THE JOURNAL July 8, 1911, p. 172). They found in malignant disease a large proportion of dissolved albumin in the stomach content one hour after the test meal with a very small proportion of pepsin and hydrochloric acid. Einstein's research confirms the importance of this test, the findings serving to differentiate simple achylia from the apepsia with malignant disease.

106. **Whooping-Cough.**—Galisch has noticed that the course of whooping-cough is more severe when several children have it together than when the child is kept apart from other children with it. The sight of others affected certainly aggravates the nervous element in the disease, and the possibility of a new infection from it cannot be positively excluded. He thinks that repeated infection is a possible factor in keeping up coryza as well as whooping-cough. In both affections he is confident that much would be gained by measures to prevent accumulation of disease products, having the child go into a second room and well ventilating the first, after each coughing spasm, using a fresh handkerchief each time in coryza.

Jahrbuch für Kinderheilkunde, Berlin

March, LXXV, No. 3, pp. 265-402

107 Differential Pneumograph and Its Application to Children. (Der differentielle Pneumograph und seine Anwendung bei Kindern.) D. Ssokolow.
108 Great Advantages of Albumin Milk in Infant Feeding. (Zur Ernährung Neugeborener mit Eiweissmilch.) A. Benfey. (Ueber Ernährung magendarmkranker Säuglinge mit Eiweissmilch.) C. Beck.
109 Gangrene of Both Calves in Scarlet Fever. Recovery. (Fall von symmetrischer Hautgangrän bei Scharlach.) L. Silberstein.
110 Familial Fatal Jaundice in Two New-Born Infants. (Zur Kasuistik des habituellen familiären Ikterus der Neugeborenen.) H. Rehn.

Mitteilungen aus den Grenzgebieten der Med. und Chir, Jena

XXIV, No. 3, pp. 383-606. Last indexed March 23, p. 902

111 *The Relations Between Phimosis and Kidney Disease. (Beziehungen zwischen Phimose und Nierenerkrankungen.) P. Heinrichsdorff.
112 Viscosity of the Blood. (Klinische und experimentelle Untersuchungen über die Viskosität des Blutes.) J. Mayesima.
113 Diagnosis and Treatment of Duodenal Stenosis. (Zur röntgenologischen Diagnostik und chirurgischen Therapie der Duodenalstenose.) H. Assmann and J. Becker.
114 *Prophylactic Nucleic Acid Injections Before Laparotomies. (Zur Vorbehandlung von Laparotomien mit subkutaner Injektion von Nukleinsäure.) E. v. Graff.
115 *Goiter in Northwestern Bavaria. (Die Verbreitung des Kropfes in Unterfranken.) W. Lobenhoffer.
116 Consequences of Removal of Long Stretch of Longitudinal Muscle in Intestinal Wall. (Folgeerscheinungen nach operativer Entfernung der Längsmuskulatur des Darmes.) A. Müller and K. Kondo.
117 *Four Cases of Lymphogranulomatosis. (Paltauf-Sternberg.) F. Blumberg.
118 *Importance of Occult Blood in Stomach Content or Stools as Sign of Cancer. (Der Nachweis von okkultem Blut in Stuhl und Mageninhalt und seine Beziehungen zur Diagnose chirurgischer Magenkrankheiten, insbes. zur Frühdiagnose des Magencarcinoms.) H. Zoeppritz.
119 *Pathogenesis of Cholelithiasis. L. Hofbauer.
120 Nature of Goiter. (Zur Frage nach dem Wesen des Kropfes.) B. Breitner.

111. **Connection of Phimosis with Kidney Disease.**—Heinrichsdorff remarks that any one who has occasion to do much necropsy work soon becomes impressed by the number and variety of conditions which may entail hydronephrosis directly or indirectly. He has recently encountered four cases in which the hydronephrosis was the direct consequence of phimosis. The text-books do not insist enough on the serious consequences liable to be entailed by phimosis, he declares; in the literature he has found only one instance recorded analogous to his four cases. No matter what the degree of phimosis or even of mere adherent prepuce, whether there is much or little obstruction to the outflow of urine, the effect is a want of cleanliness and consequent infection and balanitis, urethritis, cicatricial formations and changes in the bladder from the excessive straining even if there is no actual cystitis. The straining increases the inflammation and infiltration, the urine backs up even in the ureters, dilating them and reducing their elasticity, and hydronephrosis and uremia follow sooner or later. In the four cases described the attending physician did not connect the moderate phimosis with the kidney symptoms. The boys had complained for years of difficulty in urinating but, as they seemed well, little attention was paid to their complaints until after symptoms of uremia became apparent. Even these did not lead to detection and removal of the cause until after the uremia had been long installed, two years in one and five years in another case. A history of scarlet fever or appendicitis may aid in misleading the physician as in two of the cases reported. In two of the cases, as also in the one cited, the operation for the phimosis led to a fatal exacerbation; the patients had been suffering so long from uremic poisoning that the anesthetic used for the operation was the last straw for the urinary apparatus. The operation itself is harmless in this respect; the danger is from the ether or chloroform. This teaches the importance of operating for the phimosis without delay but exclusively under local anesthesia. The experiences related confirm further the importance of bearing phimosis in mind as a possible factor in all cases of hyper-

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trophy of the bladder with bilateral hydronephrosis. Even when the prepuce seems normal, inquiry should be made whether the patient has ever had phimosis at any time; secondary changes may be left long or permanently after the phimosis has been corrected.

114. **Pre-Operative Nucleic Acid Has No Prophylactic Value.**—Preliminary injection of nucleic acid as a prophylaxis of peritonitis was given a thorough trial in von Eiselberg's service at Vienna but the conclusions are unfavorable. In 1,056 laparotomies done under the prophylactic injections the mortality from this cause was 4.6 per cent., but in a later series of 775 laparotomies, in which it was not used, the mortality averaged only 2.7 per cent.

115. **Goiter in Bavaria.**—Lobenhoffer gives a map of the Unterfranken district showing the local prevalence of goiter and the geologic formations. In some of the towns 21 to 26 per cent. of the inhabitants have goiter. The endemics correspond always to certain geologic formations from which the drinking water is derived. Water from shell limestone is the main goiter-producer, but in a milder degree red sandstone, keuper and zechstone are also involved. He urges the authorities to bring water from a distance if need be and to train the young to recognize that unboiled drinking water is a poison in certain regions. Boiling the water seems to do away with its goiter-producing properties, and it is possible that filtering through certain substances or treating with ultraviolet rays may have the same effect. Switzerland has accomplished much in the prophylaxis of goiter; a special committee gives advice after careful study of local conditions before any new watering system is installed, and an expert geologist should be consulted for all public improvements in goiter regions. The latest research in regard to the causal agent of goiter seems to demonstrate that it is a purely chemical substratum substance which enters the water as a toxin but which is certainly destroyed by heating the water to 70 C.

117. **Pseudoleukemia.**—Blumberg reports four cases of the Paltauf-Sternberg type of lymphogranulomatosis, with necropsy in three cases and microscopic examination of the excised main tumor in the other. Not the slightest sign of ordinary tuberculosis was found in any instance, but in two cases Much's granula was found, and Blumberg thinks that this must have some causal connection with the affection and possibly may be the bridge connecting it with tuberculosis, if, as some believe, the granula is an attenuated form of the tubercle bacillus.

118. **Occult Blood as Sign of Cancer.**—Zoeppritz emphasizes that a positive reaction to the guaiac test applied to the stomach content or stools is not decisive but that a single negative response testifies against the presence of malignant disease. In a total of forty-two cases of chronic gastritis, occult blood was never found in the stools; six times large amounts of blood were found in the stomach content—it is the constant and regular discovery of invisible blood that is so characteristic of gastric cancer. He gives summaries of eight cases in which everything except the negative occult blood findings seemed to testify to malignant disease, but the course of the cases confirmed the findings of the test. In eleven cases of benign stenosis of the pylorus, occult blood was found in the stools in two, but only on one or two occasions. This occurred also in 53.9 per cent. of fifty-two cases of old gastric ulcer. In 155 cases of cancer, positive findings in both stomach content and stool were obtained in 94.55 per cent. of the 110 cases in which the diagnosis was confirmed by an operation. If the pylorus happens to be gaping, with cancer, the stomach content flows out so soon that the test may be negative in the stomach content while positive in the stool—this is occasionally observed. In five of the cancer cases the stool findings were negative with advanced cancer; some substance must be present in the gastro-intestinal tract in these rare cases which inhibits chemically the reaction. Occult blood may be regarded as an early symptom of gastric cancer, and it is the first symptom to sound the alarm with recurrence after removal of the cancer. With regularly positive findings in the elderly, the general health much impaired, he advises an exploratory laparotomy, at least, without waiting for other symptoms. He tabulates under twenty-three headings the details of his 110 cancer cases.

119. **Origin of Gall-Stones.**—Hofbauer argues to prove that the erect position of man is responsible for the conditions which favor cholelithiasis, the flow of bile not being so free as in four-footed animals. Human beings must make an effort to improve conditions in this respect, and he says this can be accomplished by training the diaphragm to wider excursions. He advocates deep abdominal breathing as a kind of automassage of the liver and bile ducts. The abdomen should be drawn in during expiration, not during inspiration. The abdominal musculature should be made to aid in expelling the breath. This forces the contents of the abdomen up toward and against the relaxed diaphragm and vice versa.

Monatsschrift für Geburtshülfe und Gynäkologie, Berlin

March, XXXV, No. 3, pp. 265-408

121 Roentgenotherapy in Gynecology. H. Eymer and C. Menge.
122 *Cesarean Section. (Zur Kasuistik des klassischen Kaiserschnitts.) A. Richter.
123 *Present Status of Decapsulation of Kidneys for Eclampsia. (Die bisherigen Erfahrungen mit Nierendekapsulation bei Eklampsie.) E. Balser.
124 Salvarsan in Operative Gynecology. O. Schaeffer.
125 Histology of Ovaries with Metritic Hemorrhages. S. Adachi.
126 Mortality from Puerperal Fever. (Sterblichkeit an "Kindbettfieber" in Bayern in den Jahren 1881-1910.) F. Loeb.

122. **Cesarean Section.**—Richter says that his late chief, Professor Leopold, hoped to round out a hundred cesarean sections without a death, but his eighty-third patient died, and he died himself just three operations short of the hundredth. Richter has continued the series, and reviews the lessons learned by this material of 107 cesarean sections with only one death, and for this the operation should not be held responsible as he explains. The fetal mortality was 0.9 per cent. In thirty-five cases the tubes were resected to prevent further conception. In fifteen cases cesarean section was done twice. The technic was the classic method. When possible the women for whom cesarean section was contemplated were taken into the clinic two weeks before term; an internal examination was made once or twice and the operation was done before rupture of the membranes, when the os was dilated. The bag of waters was punctured before the first incision, the woman already on the operating table. To ward off hemorrhage as the uterus was incised, two syringefuls of ergot or hypophysis extract were given before the operation and rubber tubing was wound around the waist. When the placenta is attached on the anterior wall of the uterus the lengthwise incision should avoid the site of the placenta as much as possible. This location of the placenta was generally detected beforehand by the course of the tubes and ligaments. The duration of labor then is of subordinate importance if everything that can harm the woman is kept away. Cesarean section is contra-indicated, he says, if the temperature is above normal and the amniotic fluid is putrid, and also if the woman has had version or forceps applied outside. The use of the colpeurynter under the conditions of a good clinic is permissible, but even this should be reduced to the minimum. The various experiences on which the above conclusions are based are related in detail.

123. **Decapsulation of the Kidneys in Eclampsia.**—Balser applied this measure as a last resort in three cases of severe eclampsia, all in young primiparæ, but without avail. He has found records of decapsulation being done for eclampsia in three cases before delivery with two recoveries; on one kidney alone, after delivery, in four cases with one recovery, and on both kidneys after delivery, in ninety-one cases with fifty-seven recoveries. The mortality in the fifty-seven cases in which the convulsions came on before or during labor was 45.6 per cent.; in the thirty-four puerperium cases it was 32 per cent. Balser adds that probably a number of other unfavorable cases have never been published. Analyzing the data cited, he draws the conclusion that the theoretical bases on which the operation is based are unstable, the indications for it are but vaguely known, and we know too little of the ultimate outcome of such a serious operation as this, especially as it is done on kidneys known to be already pathologic,

besides the dangers from infection of the wound—one patient succumbed to this and one to iodoform poisoning. On the other hand, Balser calls attention to the excellent results obtained in eclampsia with Stroganoff's prophylactic method of treatment. He has had only 6.6 per cent. mortality in his 360 cases and Balser's experience is brilliantly confirming the superiority of this method, he declares. He describes the technic in detail as applied in a recent case and states that it is absolutely harmless and entails no later injury. It is adopted, he says, in some other German clinics. (The method was described in THE JOURNAL July 3, 1909, p. 86, and July 9, 1910, p. 177.)

Münchener medizinische Wochenschrift

March 19, LIX, No. 12, pp. 625-680

127 The Appendicitis Question. (Wie können wir zur Einigung in der Appendizitisfrage gelangen?) A. Krogius.
128 *Retrograde Transportation in Narrow Organs. (Zur Frage der "rückläufigen" Bewegung in röhrenformigen Gangsystemen.) E. Goldmann.
129 The Three Stages of Tuberculosis. (Spätformen der Tuberkulose.) F. Hamburger.
130 The Mononuclears in Hemolysis and Lipolysis. (Hämolyse, Lipolyse und die Rolle der einkernigen ungranulierten basophilen Zellen.) S. Bergel.
131 Dislocation of the Fibula. (Zur Behandlung der Luxatio peroneorum.) R. Eden.
132 *Duodenal Ulcer. (Statistische und ätiologische Bemerkungen zum Ulcus pepticum duodeni.) H. A. Dietrich.
133 *Injurious Effects from Camphor. (Schädliche Wirkungen des Kampfers.) C. Happich.
134 Importance of Training in Anatomy. (Wert morphologischer Ausbildung für den Mediziner.) W. Lubosch.
135 The Children of Liquor Drinkers. (Die Trinkerkinder unter den schwachbegabten Schulkindern.) E. Schlesinger.

128. **Ascending Currents in Mucous Canals and Ducts.**—Goldmann introduced into the rectum a capsule containing charcoal or indigo in a number of patients with a fistula in the bowel, and in from one to three days particles of the foreign substance appeared in the fistula, proving the existence of antiperistaltic movements or retrograde transportation of the particles. He obtained positive findings also in experimental work and in cases of fistulas into the bile apparatus when the foreign substances were given by the mouth. Everything tends to show that retrograde transportation of bacteria and minute foreign bodies may be responsible for infection or may supply the nucleus for a concrement. The same factors may aid in the production of concrements in the urinary passages, salivary glands and appendix. Stagnation in canals and ducts favors this retrograde ascending current and subsequent infection, and hence should be combated early.

132. **Duodenal Ulcer.**—Dietrich states that evidences of gastric ulcer and of hemorrhagic erosions were found each in 1.1 per cent, and of duodenal ulcer in 0.4 per cent. of 8,538 necropsies at the Hamburg hospital, 1908-1911. In twenty-four cases the duodenal ulcer was single and in ten multiple; in four there was an associated gastric ulcer and in two hemorrhagic erosions in the stomach. In none of the cases was there a history of an extensive burn, but in no less than eight of twenty-six cases the duodenal ulcer followed an operation in which the omentum or mesentery had been ligated. A thrombus had evidently formed and worked its way backward against the current, and injured the duodenal lining where it finally lodged. He summarizes these eight cases, emphasizing the rapid progress of the ulceration in these conditions and the usual early arrosion of an artery that follows.

133. **Dangers from Camphor.**—Happich injected camphor into rabbits and guinea-pigs and the results confirmed those reported in the literature in regard to the great difference in the effects of camphor when it is inhaled or injected into an artery or vein. He ascribes the difference to the neutralizing of the injurious influence of the camphor by glycuronic acid which is generated fresh in the pulmonary circulation by the combination of oxygen and sugar. When the camphor is to be injected into a vein or artery, the individual conditions in regard to the presence of adequate amounts of oxygen and of sugar must be estimated. When either of these is known to be abnormally diminished, then the use of camphor should be restricted. This applies especially, he says, to patients in inanition, the insane, cancer patients, typhoid convalescents, diabetics, in heart disease with failing compensation, in double pneumonia and, above all, in poisoning from illuminating gas. A healthy person can bear from 2 to 4 gm. camphor, but he doubts whether the tuberculous are in fit condition to receive the injections of camphorated oil which Höhne has been recently advocating.

St. Petersburg medizinische Zeitschrift

March 14, XXXVII, No. 5, pp. 63-78

136 *Tuberculin Treatment in Progressive Paralysis. A. Pilcz.
137 Reaction to Salvarsan Injection. (Zur Kasuistik der Reaktionserscheinungen nach Salvarsaninfusionen.) J. Grunberg.

136. **Tuberculin Treatment of General Paralysis.**—Pilcz states that in eighty-six cases of general paralysis, 26.68 per cent. of the patients were clinically cured and resumed their active life, 10 per cent. were improved so that they resumed their social life again but were not capable of sustained business effort; in 39.44 the affection progressed, while in 23.2 per cent. it was apparently arrested. These results were obtained with a systematic course of tuberculin treatment in a sanatorium, the dosage higher than in tuberculin treatment of tuberculosis. This treatment was introduced by von Wagner; it is based on the frequent observation of arrest and apparent recovery from progressive paralysis following some intercurrent acute febrile infection. Wagner aims to induce a febrile transformation in the body and has found tuberculin the most convenient means for the purpose. At two-day intervals he injects subcutaneously 0.01 c.c. tuberculin in a 10 per cent. solution, up to a maximal dose of 1 c.c. Fifteen febrile reactions comprise the course. Pilcz urges physicians in general to take up this treatment of general paralysis as still better results can be obtained in private practice. He has never witnessed any tendency to untoward by-effects from the treatment. On suspicion of tuberculosis this method is not applicable and possibly injections of nuclein or of killed staphylococcus culture might be tried—the main point is to apply treatment during the incipient phase of the general paralysis, and here the general practitioner has better chances of success than in institutions where only the advanced stages are seen.

Virchows Archiv, Berlin

March, CCVII, No. 3, pp. 221-476

138 Consequences of Ligating Outlets of Glands. (Zusatz über die Folgen der Unterbindung des Ausführungsganges der Bauchspeicheldrüse und anderer Drüsen.) G. Ricker.
139 Primary Endothelioma of Lymph-Nodes. (Fall von primärem Endotheliom der Lymphdrüsen.) A. Da Gradi and M. De Amicis.
140 Multiple Benign Epitheliomas in the Skin with Mixed Tumor in the Parotid. T. M. van Leeuwen.
141 Adrenal Cysts. (Zur Kenntnis der Nebennierenzysten.) W. Nowicki.
142 Congenital Atresia of Duodenum. (Ueber angeborenen Verschluss des Duodenums.) F. Kermauner.
143 The Infundibulocolic Ligament. (Eine Bauchfelldupliktur zwischen dem Mesosigmoideum und dem weiblichen Geschlechtsapparat.) W. Liepmann.
144 Sclerosis of Portal Vein. (Ueber Pfortadersklerose.) M. Simmonds.
145 Autolytic Production of Lactic Acid in the Liver. (Autolytische Milchsäurebildung in pathologischer Leber.) H. Youssouf.
146 Leukocytes and Leukemia. (Hämotologische Studien. III.) E. Neumann.
147 Origin of Amyloid Concrements in the Lungs. (Entstehung der Corpora amylacea in der Lunge.) H. Brutt.
148 Local Action of Salvarsan on Intragluteal Injection. (Oertliche Wirkung des Salvarsans bei intraglutäaler Injektion.) H. Löhe.
149 Behavior of Liver in Respect to Fat in Food. (Verhalten der Leber gegenüber den verschiedenen Arten von Speisefett.) S. S. Chalatow.
150 Fatty Degeneration of Stellate Cells. (Die Cholesterinesterverfettung—Cholesterinstenatose—der Kupfferschen Sternzellen.) R. Kawamura.

Wiener klinische Wochenschrift, Vienna

March 21, XXV, No. 12, pp. 439-474

151 Thorium Treatment of Leukemia. (Behandlung der Leukämie mit Thorium X.) W. Falta, Krisor and L. Zehner.
152 Action of Radium Emanation. (Wirkungen der Radiumemanation.) E. v. Knaffl-Lenz.
153 Pathogenesis of Appendicitis. E. Miloslavich.
154 Topical Diagnosis from Tests of Kidney Functioning. (Topische Nierendiagnostik auf Grund der Funktionsprüfung.) V. Blum.
155 Bronchoscopy for Foreign Bodies. (Bronchoskopie bei Fremdkörper.) H. v. Schrötter.
156 Treatment of Incarcerated Hernia in the Duodenojejunal Fossa. (Ein operativ geheilter Fall von inkarzerierter Treitzscher Hernie.) J. Gobiet

Zeitschrift für klinische Medizin, Berlin

LXXIV, Nos. 5-6, pp. 355-478. Last indexed March 23, p. 905

157 Movability of Heart and Accentuation of Apex Beat During Reclining on Left Side. (Verschieblichkeit des Herzens und Verstärkung des Herzspitzenstosses in linker Seitenlage.) M. Georgopulos.

158 Two Cases of Fatal Hematemesis with Cirrhosis of the Liver. (Tödlicher Hämatemesis bei atrophischer Leberzirrhose.) W. Zelensky.

159 Icteric Blood Corpuscles in Jaundice of the Newly Born. (Ikterische Zellen im Blute bei Icterus gravis neonatorum.) P. Neukirch.

160 Ameba Dysentery and Eosinophilia. (Zur Kenntnis der Amöbendysenterie und der enterogenen Eosinophilie.) A. Albu and A. Werzberg.

161 *Means to Induce Hyperemia in the Lungs. (Versuche zur Erzeugung von Lungenhyperämie.) O. David.

162 Friction of the Blood and Poiseuille's Law. (Reibungswiderstand des Blutes und Poiseuillesches Gesetz.) W. R. Hess.

163 The Liver Diastase with Experimental Nephritis. (Beitrag zum Zusammenhang der Drüsen mit innerer Sekretion.) F. Orkin.

164 Nature of Gout. (Ueber die Wirkung des Atophans, mit einem Beitrag zur Theorie der Gicht.) M. Dohrn.

165 Action of Phosphorus on Myocardium. (Wirkung des Phosphors auf die Herzmuskulatur.) I. Rodow.

161. To Induce Hyperemia in the Lungs.—David describes the various means that have been devised to promote the local circulation in the lungs, and expatiates on the benefit therefrom in pulmonary affections. His extensive experimental research has demonstrated, he says, that nothing is so effectual for this purpose as to breathe air with less oxygen than ordinary air. His experiments have established, he continues, that a reduction of the oxygen partial pressure by 10 per cent. induces pronounced hyperemia in the lungs while reduction to this point is free from any injurious influence on the lung tissue. He is inclined to explain the local hyperemia as the result of the exaggerated work of the alveolar cells. David has devised a special apparatus to furnish air to breathe with reduced oxygen content.

Zeitschrift für Urologie, Berlin

March, VI, No. 3, pp. 177-256

166 *Aims and Methods of Modern Urology. (Wege und Ziele der modernen Urologie.) C. Posner.

167 *Calculus Impacted in Ureter Mouth Nucleus of Bladder Tumor. (Ureterstein als ätiologisches Moment für Blasentumoren.) Lotsy.

168 *Differentiation of Hydronephrosis. (Zur Diagnose der Hydronephrose vortäuschenden Erkrankungen.) N. P. Trinkler.

169 Two Cases of Chyluria. (Zur klinischen Bedeutung des Fettharnes.) T. Cohn.

170 *Syphilis of Bladder and Ureters. (Syphilis der Harnblase und der oberen Harnwege.) N. A. Michailoff.

166. Present Status of Urology.—Posner's article was read at the inaugural session of the newly organized Berlin Urologic Society. He emphasizes the borderland character of this specialty and how it encroaches on numerous other specialties all around, besides its relations to general medicine. He warns that the triumphs of urologic surgery must not delude into the belief that progress is to be sought only along this line, and that urology has reached the limit of its usefulness when the syringe and the catheter fail. He declares that those who know what terrible consequences may be entailed by a gonorrheal inflammation of the urethra, will alight it as little as a tuberculous affection of the kidneys; those who know the decisive importance of the first catheterization of a patient with enlargement of the prostate will not treat it lightly any more than if it were the removal of the enlarged gland itself, and those who do not call to their aid for diagnosis all the findings of palpation, digital and instrumental, all the results of analysis of the urine, all the disturbances in innervation, in short, the entire clinical picture, will not be able to profit understandingly even from the most striking cystoscopic findings. There are no such things as trifles in urology; in the due estimation or neglect of the minor points lies only too often the key to success or failure in the individual case. He adds that very few organs are so functionally important as the urinary apparatus. Never at any moment is any trouble in the urinary apparatus of purely local importance. Every step we take or refrain from may be fraught with the most important and far-reaching general consequences. In view of this enormous responsibility, he adds, we must strain every nerve to broaden our diagnostic powers and perfect the science of indications and the means of treatment. The local urological society has been founded to enable each to share the fruits of his research with others working in the same lines, and have others pass judgment on their value and spur each to greater achievements.

167. Bladder Papilloma with Ureter Calculus for Nucleus.—After removal of part of the papilloma at three sittings, the patient passed an oxalate stone and all the pains which had tormented her for three years ceased at once. The unsuspected stone had been impacted in the ureter mouth and the irritation from it had induced the papillomatous growth over it.

168. Differentiation of Hydronephrosis.—Trinkler reports a case of assumed hydronephrosis. Cystoscopy showed that the right ureter gave less urine than the left which seemed to be working normally. The tumor was spherical; it had developed in less than two days and its location in the rear of the hypochondrium and front of the lumbar region, and the transmission of fluctuation up into the right kidney region on percussion from the front—all signs pointed to right hydronephrosis; gynecologists consulted said that the genital apparatus was not involved. The tumor proved to be an ovarian cyst with a very long pedicle which had become twisted. Adhesions between the cyst and the liver kept the cyst unusually high. When the liver is enlarged and congested, it is liable to push the kidney down and fill its place. In another case recently the liver and gall-bladder had sagged into the lumbar region while the kidney had been pushed over toward the bifurcation of the aorta, almost into the small pelvis. In the two cases previously mentioned the cystoscopic findings were misleading; the reduced output from the right kidney was not due to functional but to mechanical causes.

170. Syphilis of the Bladder.—Michailoff's patient was a woman of 39, the wife of a physician; she complained of a dragging pain in the hips and recurring hematuria during the last five years. The hip region pains had recurred at intervals during fifteen years. The cystoscope revealed numerous papules resembling the cutaneous lesions of syphilis. The Wassermann reaction was negative, but repeated a week later it gave a positive response, and under mercury and iodid internally and boric acid irrigation of the bladder, the bladder affection took a remarkable turn for the better.

Zentralblatt für Chirurgie, Leipsic

March 23, XXXIX, No. 12, pp. 385-416

171 *Case of Gasserectomy Under Local Anesthesia. (Exstirpation des Ganglion Gasseri in Lokalanästhesie.) F. Krause.

172 *Advantages of Tincture of Iodin for Sterilization After Abdomen is Opened. (Zur Verwendung der Jodtinkturdesinfektion am eröffneten Magen-und Darmtrakt.) E. Payr.

173 *Care After Prostatectomy. (Zur Nachbehandlung der suprapublschen Prostatektomie.) E. E. Goldmann.

171. Gasserectomy Under Local Anesthesia.—Krause reports a case in which he removed the gasserian ganglion under local anesthesia, the patient stupefied first with a strong sedative by the usual technic. When she roused from the influence of the sedative she stated that she had not noticed that any operation was being done on her. She was a woman of 72 with a severe valvular defect. All the peripheral branches of the trifacial nerve had previously been resected and deep injections of alcohol made—all to no effect. She was accustomed to pain, which may have cooperated in making her less sensitive to the gasserectomy.

172. Iodin Sterilization of the Open Abdomen.—Payr has been in the habit during the last three years of painting with iodin the mucosa of stomach and intestines when it was exposed in the course of a laparotomy, and he has been much impressed with the advantages of the method and lack of by-effects. It is a most valuable aid, he says, in resection of the stomach or intestine. He first wipes the mucosa dry and then paints it once or several times with the tincture of iodin. The irritation therefrom seems to be a powerful stimulus for the local healing process. Examination of the field of operation later has shown always faultless healing. The course of the cases in which the iodin had been applied always seemed shorter and more favorable than in those without.

173. Treatment After Prostatectomy.—Goldmann drains after suprapubic prostatectomy, using a drain big enough to fill the entire incision, which he keeps small on purpose. He

aims to enucleate only the central hypertrophied masses of the prostate. If urine tends to collect and stagnate in the cavity left by their removal, he arranges for its continuous irrigation with a weak boric acid solution through a retention catheter, kept at an even temperature and instilled drop by drop. In threatening cases this is supplemented every hour by flushing out the wound with hydrogen dioxid; this removes any coating accumulating on the tissues. By this technic he was able to cure the patient in a recent case threatening severe sepsis; the continuous irrigation did not interfere with healing or continence while it prevented all danger of formation of concrements in the cavity left by the prostatectomy and also of secondary septic hemorrhages, both of which contingencies occurred and nearly proved fatal in two each of his former series of cases.

Zentralblatt für Gynäkologie, Leipsic

March 23, XXXVI, No. 12, pp. 353-384

174 The Epithelium in the Uterine Cervix. (Zur Frage des Epithels im Isthmus uteri.) O. Büttner.
175 Bacteriologic Findings in Six Cases of Puerperal Fever. P. Hüssy.
176 Vaginal Fixation of Uterus Through a Laparotomy. (Vesico-Vaginofixatio uteri abdominalis.) K. Czerwenka.

Gazzetta degli Ospedali e delle Cliniche, Milan

March 19, XXXIII, No. 34, pp. 353-360

177 Efficacy of Subconjunctival Injection of Mercuric Chlorid. (Sul valore terapeutico delle iniezioni sottocongiuntivali di sublimato corrosivo.) L. Marchetti.

March 21, No. 35, pp. 361-368

178 Treatment of Large Umbilical Hernia. (Ernie ombellicali di grosso volume.) P. Leonardo.

Policlinico, Rome

March, XIX, Medical Section No. 3, pp. 97-140

179 Leukemia and Pseudoleukemia. (Il substrato organico individuale nella eziologia e nella determinazione clinica delle forme pseudoleucemiche e leucemiche.) P. D. Siccardi.
180 *Severe Parasitic Anemia. (Anemia grave con reperto di flagellati nell'intestino, loro morfologia e caratteri culturali.) G. Franchini.
181 First Case of Three-Day Fever in Catania. (Primo caso di febbre da pappataci in Catania e nella Sicilia Orientale.) M. C. Francavigilia.

March, Surgical Section No. 3, pp. 97-144

182 Experimental Research on Transvesical Prostatectomy and Its Effects. (Ricerche sperimentali sugli esiti della prostatectomia transvesicale e sulla funzione della prostata.) N. Leotta. Commenced in No. 2.
183 Experimental Resection of the Testicle. (Sulla resezione del testicolo.) V. Baranbo.
184 Experimental Research on Influence of Nephrectomy on Opsonic Index. (L'influenza della nefrectomia unilaterale sull'indice opsonico, rispetto ai germi piogeni.) A. Poggiolini.

180. **Anemia from Cercomonas in the Intestines.**—In Franchini's case the patient had recurring attacks of severe anemia, weakness, abdominal pain and diarrhea during twelve years, with intervals of years of comparative health. Finally a severe attack was traced to the presence of the *Cercomonas* in the intestines; the reds numbered only 500,000 and the hemoglobin was only 17 per cent. when treatment was instituted. The patient rapidly recuperated as the parasites were expelled. In another case a woman had had symptoms of gastric ulcer for years; it finally perforated and in the pus aspirated from the circumscribed peritonitis the *Cercomonas* was found in great numbers. These protozoa had not been responsible probably for the lesion in this case, but their presence had evidently aided in keeping up the chronic irritation. Guastalla has reported a similar case, the gastro-intestinal symptoms having been observed at intervals for twenty years before the parasite was finally discovered in the stools. In the above cases no benefit was obtained from any measures until after the parasites had been expelled. Franchini gives a colored plate of the parasites grown on agar, showing up well the flagella and spine in certain phases of their growth.

Riforma Medica, Naples

March 9, XXVIII, No. 10, pp. 253-280

185 *Industrial Inhalation of Flour Dust. (Il lavoro del mugnaio: l'inalazione di polvere di farina.) L. Ferrannini.
186 Cancer of the Parotid. (Caso di periendotelioma della parotide.) A. Alhaique.
187 Diagnosis of Duodenal Ulcer. (La diagnosi precoce dell'ulcera duodenale non complicata.) S. Rizzardo

185. **Industrial Inhalation of Flour Dust.**—Ferrannini found that the dust inhaled was apparently digested and absorbed and thus did no harm as a rule. But when the dust was in excessive amounts or the air passages were diseased, the dust accumulated unmodified in the bronchi and alveoles. His research was carried on in the rooms where the flour was put up in bags, and the vital capacity of some of the workers there was found much reduced from this obstruction of parts of the lower air passages, when the natural conditions of digestion of the inhaled flour dust are suspended.

Semana Medica, Buenos Aires

February 29, XIX, No. 9, pp. 397-448

188 *Symmetrical Gangrene of the Extremities. (Consideraciones sobre la etiologia y tratamiento del sindrome de Raynaud.) G. B. Udaondo.
189 *Artificial Cell Production. (Apuntes de quimica.) V. Delfino.

188. **Symmetric Gangrene.**—Udaondo says that Raynaud's disease is comparatively frequent in Argentina, the humidity of the climate being possibly a contributing factor. The history of the affection is reviewed and the importance emphasized of Petges and Bonnin's two recent cases in which Addison's and Raynaud's diseases were associated in adults, and of a case reported in 1908 in which Raynaud's disease became accompanied later by exophthalmic goiter. Voivenet and Fontaine have also reported six cases of Raynaud's disease accompanied by perverted thyroid function. In two cases in Udaondo's own practice, the symmetrical disturbances in circulation developed in previously healthy individuals. He regards Raynaud's disease as shown to be a series of symptoms resulting from some toxic action on the nerve centers or the peripheral branches. Even in the so-called idiopathic form —which is encountered in about a third of all cases—there must be some latent infectious process or disturbance in some organ with an internal secretion as the primary source for the toxic action.

189. **Artificial Cell Production.**—Delfino's illustrated article explains the chemical production of crystals and colloids and shows how it is possible, with inorganic salts and colloids, to produce imitations of natural cells. The artificial cells have a nucleus and undergo mitosis and can be stained, fixed and preserved by the ordinary methods of histologic technic.

Hospitalstidende, Copenhagen

March 20, LV, No. 12, pp. 325-356

190 *Inherited Tendency to Diabetes. (Om den arvelige Disposition til Sukkersyge.) K. A. Heiberg.
191 Lupus of the Tongue. (3 Tilfælde af Lupus vulgaris linguæ.) O. Strandberg.

190. **Inherited Predisposition to Diabetes.**—Heiberg quotes Frerichs' 10 per cent. of 400 cases of diabetes in which an inherited predisposition might have been incriminated; Külz' 25 per cent. of 592 cases; Naunyn's 17 per cent. of 398; von Noorden and Williamson reporting about the same percentage, while Schmitz found a history of diabetes in other members of the family in 47 per cent. of 2,115 cases. Heiberg tabulates the data he has learned from investigating the family history among 100 diabetic and 100 other hospital patients of the same class, not including any pay-patients. Only seven relatives with diabetes were found among the 100 non-diabetics while the corresponding number among the 100 diabetics was eighteen. The diabetes had commenced before the age of 10 in seven of the 100 cases and in eighteen between 10 and 20. In 90 per cent. no cause for the diabetes was known; in the others there was cirrhosis of the liver or lithiasis. Even making due allowance for the fact that a history of diabetes in the family is more likely to be learned by a diabetic than by the non-diabetic, still the preponderance of evidence is in favor of heredity as a predisposing factor.

Books Received

JOURNAL Announcements, Knocks and Boosts, Books Received and changes in the Public Service will be found in the advertising section, commencing on the second page following reading matter.

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